# ASL

Australian Society for Limnology Inc.

# NEWSLETTER

*Volume 43 # 1, March 2005*

Registered by Australia Post

Print Post Publication No. PP 381667/00125

ABN 54 606 483 226

ISSN 1037-2512

# AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology Inc. (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

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Material for publication in the Volume 43 #2 newsletter (June Issue) is due by Friday 27 May 2005.

All articles should be forwarded, if possible, as unformatted text on a disk or via email.

ASL Home Page - http://www.asl.org.au/

This Newsletter is printed by Border Multi Print Pty Ltd Wodonga, packaged by Kalianna Pty Ltd and distributed by Australia Post.

Membership Information and contact details of the Regional Executive Members can be found at the back of this Newsletter.

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# THE LAST LAUGH

Well, like every good bottle of Sparkling Shiraz, the end has come.

This will be my last editorial of the newsletter, and I'd like to thank Emma who so readily volunteered to take on the job. I'll help Emma out with the June edition, but all emails in regard to the newsletter should now be sent through to Emma (contact details on page 4).

I can't believe it's only been three years (!@#$%) since I started as your Newsletter Editor. The one advantage of being the Editor is that you do actually read the entire newsletter.

And if some of you out there thought that was the last you'd see (or heard) from me at ASL Congresses – think again, see you in Tassie.

Cheers, take some time to laugh at yourselves, be good and smile often.

Best wishes,

**Rhonda**

# PRESIDENT'S REPORT

Hello all! With the New Year some changes have occurred in ASL and we welcome our new webmaster (what is the p.c. term for webmaster by the way??) **Heather Shearer** and our new newsletter editor, **Emma Wauchope**. The speed with which these voluntary positions where filled within weeks of the call on the e-mail list, reflects for me the nature of our society – basically a really nice and helpful bunch of people!

Heather is currently employed with the Queensland Department of Natural Resources and Mines, and has previously looked after the web page of Wetland Care Australia, as well as lots of other websites, including maintenance and editing of government agency websites. If you have not visited the ASL web page for a while, I encourage you to do so. With the new look of the web page should come new enthusiasm with its content: why not pass on those conference or workshop details to **webmaster@asl.org.au**? No doubt some of us would love to know about that obscure conference on the strange behaviours of feeding midge larvae in Molvania that we just couldn't find on Google!

Emma, our incoming newsletter editor, is currently studying at Charles Sturt University and is employed as a natural environment officer in local government. Following a period of co-editing with Rhonda, Emma will soon be taking over and we will no doubt be hearing from her often as she discovers the joys of sourcing material for the quarterly newsletters!

On behalf of ASL I would also like to say thank you again to the outgoing webmaster, Simon Josey, and newsletter editor, Rhonda Sinclair. Simon has made an enormous contribution to the society during his term as webmaster. I can't even remember when Simon started in this position, as to me his name has always been synonymous with introducing ASL to the web! Similarly Rhonda's effort on the newsletter has been tremendous – no doubt one of the hardest jobs has been to cheerfully again and again elicit contributions from members!

In the December 2004 newsletter we called for members to represent ASL at the upcoming 'Science-meets-Parliament' event organised by FASTS in Canberra in March. Five of us: Andrew Boulton, Brad Sherman, Ayesha Burdett, Shaun Meredith and myself will be attending SmP and we will report back in the next newsletter.

Our next Congress will be held at the University of Tasmania in Hobart from 28th November to 2nd December 2005. The Organising Committee (Danielle Warfe, Joanne Clapcott and John Gooderham) are already very busy and is planning some exciting social and scientific activities. Previous conference committee members, in particular Belinda Robson and Jacqui Griggs, have passed on their extensive expansion of the ASL conference organising notes to the Tasmanian group, and we are hoping to get to the stage of finally linking our web-based registration with web-based abstract submission. Our conferences have grown and we now regularly have over 230 participants - web-based options will hopefully ease the job for future conference organisers. Enjoy this edition of the newsletter.

All the best to all of you.

**Sabine**

# ASL Executive Teleconference, held on 15 February 2005

Present: S. Schreiber, M. Hart, R. Marchant, N. Rea, D. Warfe, S. Bunn, A. Boulton, F. McKenzie-Smith, H. hearer, R. Sinclair, B. Downes and S .Wild

Apologies: F. Bouckaert, A. McGregor and B. Zampatti

**1. Donation to the International Commission for Zoological Nomenclature (ICZN):**
At the last executive meeting the ASL agreed to make a donation to the ICZN but no decision on the amount to be donated was taken. R. Marchant suggested $300 ($150 was donated in 1993 to ICZN) and this was accepted unanimously.

**2. Adelaide Conference:**
M. Hart reported that a few outstanding payments still had to be made but it was clear that the meeting had made a handsome profit which would be used to support ASL activities. The notes on conference organising have been consolidated into a document, which has been sent to D. Warfe who is leading the organisation of the 2005 Congress in Hobart. She confirmed with the executive that conference sponsorship can be sought from private organisations. M. Hart will be in touch with the Hobart team about conference finances. H. Shearer has offered to introduce D. Warfe and J. Gooderham to software that will improve the efficiency of abstract submission and delegate registration.

**3. ASL Congress in 2006:**
A joint meeting in Cairns with the Society for Wetland Scientists (SWS) has been suggested. Although it was proposed that the ASL and SWS have a single day of overlap, the executive considered that the ASL meeting would probably get swamped by the much larger SWS meeting. Exec members also pointed out that the ASL had no one in Cairns who could organise the ASL part of the meeting. It was suggested that the ASL could fund a couple of students to attend the SWS meeting or sponsor a workshop. S. Schreiber will draft a letter to SWS describing the difficulties, declining the offer of a joint meeting, but discussing other ways of welcoming the SWS meetingdownunder. Mildura has been offered by The Murray-Darling Freshwater Research Centre (MDFRC) as an alternative venue for 2006. This offer will be pursued by contacting B. Gawne (Director of MDFRC). A. Boulton has offered UNE in Armidale as a "fallback" if all else fails.

**4. ASL Congress in 2007:**
The ASL is scheduled to hold a joint meeting with the NZ Limnological Society in NZ in 2007. S. Schreiber will write to the NZers to confirm details.

**5. Science meets Parliament:**
Five ASL members have registered to attend, four of whom are receiving funds from the ASL; this amounts to about $2000.

**6. ASL Student Representative:**
A. McGregor could not attend the teleconference and thus this item was deferred.

**7. Bill Williams Travel Scholarship:**
One application has been received since the last congress. This is currently being assessed. Applications will close in August 2005. R. Marchant will advertise the scholarship and closing date in the newsletter. N. Rea has offered to be a judge (with A. Boulton and S. Schreiber) for this round of applications.

**8. ASL web site:**
H. Shearer (the new webmaster) is updating the web site and will collaborate with M Hart in updating the membership database.

**9. ASL Policies:**
The Aquatic Reserves Policy has been developed over the last 4 years but is still not finalised. F. Bouckaert and Stuart Blanch have examined the current draft which appears to be too long and seems more like a review than a policy. S. Bunn suggested that the document should be shorter and simply reference other literature (rather than attempt to summarise it), otherwise it will date quickly. The executive agreed that the current version should be examined by N. Rea and A. Boulton and then sent to S. Blanch for comments. Once finalised the document would be put on the web site and would only be available electronically.

**10. Newsletter Editor:**
R. Sinclair has been contacted by Emma Wauchope (ASL member from SA) who has volunteered to take on the role of editor. R. Sinclair will produce the March issue of the newsletter and then help Emma with the production of the next issue or two to ensure that any problems are solved. Printing and packaging of the newsletter will continue to be done in Wodonga. Emma is presently studying for a Postgraduate Certificate in River Restoration through Charles Sturt University, having completed an undergraduate degree in Biodiversity & Environmental Management at the University of South Australia; she is employed as a natural environment officer in local government.

**11. Dues relief for long-standing members:**
A. Boulton raised the issue that long-time members who are still active might be excused from paying ASL fees. After some discussion it was felt that those who have been members for >30years could be excused fees if they notified the membership officer of their status when renewal notices were sent out. M. Hart and S. Schreiber will examine the membership database to determine the implications of this for the society.

**12. Retrospective ASL medals:**
A. Boulton has drafted a letter to pre-1999 winners of the Jolly Award asking whether they would like to receive ASL medals, which have only been presented to the four most recent medallists. This letter needs to be transferred to ASL letterhead and signed by S. Schreiber.

**13. Letter to FASTS about ARC funding:**
FASTS have responded to this letter (written at the suggestion of B. Robson at the last AGM) and this response will be printed in the newsletter.

**14. Acknowledgements:**
Registration at last year's congress is to be paid for M. Hart and J. Griggs to thank them for their efforts in organising the conference. Thank you letters have also been sent (by A. Boulton) to all sponsors of the meeting. S. Schreiber has also written to Simon Josey, the former webmaster, and to Rhonda Sinclair, the newsletter editor, thanking both for their work and commitment to ASL.

**15. Next meeting:**
The next teleconference will probably be held in June.

# Attention All Members:

**The 44th Annual ASL Congress is to be held at the University of Tasmania from 28 November to 2 December 2005.**

**Organising Committee: Danielle Warfe, Joanne Clapcott and John Gooderham.**

**Keep your eyes on the ASL webpage and future newsletters for more details as they become available.**

# CALL FOR APPLICATIONS

# BILL WILLIAMS TRAVEL SCHOLARSHIP (BWTS)

Applications are invited from research students for financial assistance in the form of the Bill Williams Travel Scholarship (BWTS) to enable them to present a paper or poster at an overseas conference, symposium or workshop. Bill Williams was a founding member of the Australian Society for Limnology, a leading pioneer of limnological research in Australia and widely known both inside and outside the country for his advocacy of the study of inland waters. He was very conscious of the need to encourage international exchange amongst limnologists, hence the inauguration of this scholarship.

The purpose of this scholarship is to enable research students to present their work in an international forum. Students who are carrying out research in any branch of limnology for a postgraduate degree (but not an Honours degree) are eligible to apply. The following rules apply:

1. Applicants must be current postgraduate students at any Australian University or have submitted their thesis within 12 months of applying for the BWTS.
2. Applicants must have been members of the ASL for at least 12 months and have current financial membership.
3. The BWTS will be awarded by a committee consisting of the ASL President, the ASL Treasurer, and a representative of the Bill Williams Memorial Committee.
4. Applications must include a written statement (no more than one A4 page) describing the research, its significance, and the stage that has been reached. The statement must be endorsed by the student's supervisor, who should confirm that the student has reached a stage where something useful can be presented. An abstract of the paper that the applicant proposes to present must also be included, and the presentation must acknowledge the scholarship in full. A CV should be included.
5. Applicants must submit a budget indicating the various costs of their trip. This should indicate how the scholarship will be used and what other support they hope to obtain. The intention is that the scholarship will cover a substantial amount of their costs, e.g. an airfare.
6. Award of the scholarship will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made; and (iv) ability to present a clear and concise statement of the study.

One scholarship will be awarded this financial year (2004-05) and the hope is to make an award once every two years. Applications should be sent to Dr R. Marchant, ASL Secretary, Museum of Victoria, GPO Box 666E, Melbourne VIC 3001 by **Wednesday 31 August 2005.**

# COPY OF LETTER TO FASTS TO ENQUIRE ABOUT ARC FUNDING OUTCOMES, AND FASTS RESPONSE (FROM AGM HELD IN ADELAIDE)

**Letter from ASL to FASTS, 16 December 2004:**

Dear Robyn,

At our recent AGM for the Australian Society for Limnology some of our members have asked the following questions which we feel are appropriate to put to FASTS as FASTS may be in a position to seek answers to these questions.

In the last few years, the Australian Research Council has called for Discovery and Linkage Grant applications under a series of National Research Priorities. In the last two years, one of these priorities has been 'Water: a critical resource'. Members of the Australian Society for Limnology are particularly interested in the science and management of Australia's water resources, and would like to know how the setting of this National Priority has affected the funding patterns of the ARC.

In particular, we would like to know:

- for the 2004 and 2005 Discovery Grant rounds, how many applications listed Water: a critical resource as their priority and, of these, how many were funded.
- for the 2004 - 2005 Linkage rounds, how many applications listed Water: a critical resource as their priority and, of these, how many were funded.

If possible, we would like to also know how many applications that aligned themselves with the Water priority were reviewed by each ARC panel, and of these how many were successful in receiving funding.

We would hope to pass this information on to members so that they can evaluate the emphasis placed on water resources by the ARC in its two most prestigious types of grants.

Thank you for your consideration and we look forward to the reply of FASTS.

With best wishes
Sabine

==========

**Response received from FASTS, 17th December 2004:**

Dear Sabine

Good question about ARC and correlation between grants, success rates and national priorities.

The short answer is I don't know and nor do the ARC.

The two key categories ARC organises and reports success rates on (apart from obvious things like institutions) are field of research and socio-economic benefits. These are ABS categories which well and truly pre-date the national priorities.

Applicants may self-select a national priority which is assessed by the independent reviewers however this data is not subsequently organised into reporting mechanisms on specific national priority areas or their elements.

ARC do report in a broad sense on the national priorities as a % share of the total quantum to meet their obligations to the Govt directions. However, this information is not disaggregated or analysed in the sort of terms you are after.

Clearly there will be questions as to what exactly the boundaries are in defining the national priorities (that was always one of the problems with the concept in the sense that academics are more than capable of creatively re-describing their work to fit all sorts of broad definitions).

I think your question is perfectly reasonable and I would not be at all surprised if, over time, the ARC are directed to gather their data in a way that requires them to report the sort of info you are after not withstanding the somewhat arbitrary and fuzzy nature of those priorities.

Regards

Bradley

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# SCUTTLEBUTT, RUMOUR AND PRATTLE

## QUEENSLAND DEPARTMENT OF NATURAL RESOURCES AND MINES

**Aquatic Ecosystem Health Unit, Indooroopilly**

A few more staff changes have come to pass in our little unit as **Michelle Winning** has moved on for a permanent position with the policy gurus and **Alexandra Cooper** and **Farrah Zavahir** have joined the fold for six months. Meanwhile, the work goes on...

**Jon Marshall, Alisha Steward, Sharon Marshall** and **Toni Radcliffe** have been kept busy with work on projects dealing with environmental flows. **Toni** and **Sharon** have been busily conducting literature searches on species nominated as environmental assets within the Moonie and Pioneer river water resource planning areas. This work will support our regional biologists in developing a monitoring program to assess environmental flows in these catchments.

A workshop was held in Toowoomba in late January to select suitable assets for monitoring water management activities in Toowoomba. Goondiwindi regional biologists **Tariq** and **Minal Khan** put the asset selection process through its paces, including identifying key assets for investigation to better understand the relationships between flow and riverine ecology.

**Jon** and **Alisha** have also progressed with the hydraulic modelling project, constructing a three-dimensional model of a 1km reach of the Dawson River. This model combines both terrestrial and aquatic survey data, including elevation, habitat units and flow velocity. The picture emerging provides an interesting view of whole-site hydrodynamics and the effects of water level on habitat availability. Once verified, the model will be evaluated for use in determining critical fish habitat availability in relation to flow.

As well as this, the intrepid pair has also teamed up with **Glenn McGregor** to develop conceptual models of aquatic ecosystems in Queensland, based on freshwater biophysical provinces. Janet Stein from ANU has also contributed valuable data to this project.

**Jon** has submitted a paper on spatial and temporal patterns in macroinvertebrates, co-authored with Fran Sheldon, Martin Thoms and unit leader **Satish Choy**, as part of the unit's contribution to the CRCFE Dryland Refugia project.

The ever-patient **Andrea Prior** has continued work on the Department's Ambient Biological Monitoring Program. She has recently completed the AM03-04 report and is beavering away at the redesign of the Program prior to the 2005 sampling round. This includes the daunting task of conducting power analyses to determine the number of sites required to adequately cover each freshwater biophysical province.

Meanwhile, external projects guru **Chris Thomson** has gone part-time on us, and not just metaphysically. Chris has been 'scope-bound, identifying macroinvertebrate samples from Mackay and Ayr, as well as working with the QLD EPA to establish water quality guidelines for South East Queensland. **Alex Cooper** has stepped up to the role of data provision officer in Chris' absence, as well as ably assisting **Diane Conrick** with implementing Quality Environment Systems and preparing the AQEIS database software for implementation. Di herself is at the RHATPAC meeting in Sydney as I type.

The Freshwater Ecosystem Health Monitoring Program Team is keeping as busy as ever, with and staffers **Susan King** and **Dean Holloway** processing samples and data from the spring sampling round. **Sue** and **Dean** have processed over 120 macroinvertebrate samples since October and are prone to nightmares about very small things. Project leader **David Moffat** has been putting together the team's contribution for the program's Annual Technical Report, as well as setting the wheels in motion for the upcoming Autumn sampling round: with four new sites to incorporate and temporary staff to hire, EHMP is as frantic as ever.

NAPster **Nelli Horrigan** has abandoned ship temporarily to complete her PhD at the University of Adelaide, leaving **Jason Dunlop** to his own devices. Thankfully, **Farrah Zavahir** has been able to lend a hand, helping Jason cultivate and test algae to determine salinity tolerances. **Glenn McGregor** and **Jaye Lobegeiger** also continue with their algae work with their cyano-toxin research in full stride.

The **AEH** unit as a whole is also gearing up for our annual Science Workshop to be held on North Stradbroke Island in mid-March. This workshop will provide an ideal opportunity to discuss the future direction of our work and to converse with departmental regional biologists and planners to ensure the quality of aquatic work within the department.

From

**Toni Radcliffe**

## AUSTRALIAN CENTRE FOR TROPICAL FRESHWATER RESEARCH JAMES COOK UNIVERSITY, TOWNSVILLE

ACTFR in partnership with Conservation Volunteers Australia and Wetland Care Australia, have won the job of delivering the first stage of the Coastal Wetlands Protection Program. This $2M program aims to identify, negotiate and undertake on-ground works to improve the environmental values of high priority coastal wetlands along the Great Barrier Reef coast of Queensland. The program is tied with the Great Barrier Reef Water Quality Protection Plan, with the goal of improving water quality and biodiversity in wetlands associated with the values of the Great Barrier Reef.

The wet season began with a tropical low that created flooding throughout the northern region, resulting in vehicles and staff going in all directions to collect water quality samples through the various stages of flood hydrographs in many catchments. Such ventures often result in unusual incidents and this year, these included the loss of a 4WD vehicle to floodwater damage, and a night time weekend rescue, involving a 6km run along muddy tracks, of water quality equipment stationed in a creek that had a major flood event the next morning. Must budget better for these things next time. **John Faithful** and **Jon Brodie** have been coordinating wet season runoff water quality monitoring from various land uses (sugar cane, banana, urban and pine plantations across various coastal regions of north Queensland.

The exotic pest fish, *Oreochromis mossambicus*, better known as tilapia, were recorded from the upper Burdekin catchment late last year, a finding that because of its catchment size, doubles their potential distribution in Queensland. This comes not long after they were found in the upper Herbert catchment, between Townsville and Cairns. Since then, they have been found in another part of the Burdekin catchment and there are new catchment records for guppies and mosquitofish, plus the finding of another, as yet undetermined cichlid species in the lower Burdekin. On top of all that, a new exotic species from SE Asia - the three-spot gourami, *Trichogaster trichopterus* has now established populations in two coastal creek systems on the Burdekin floodplain. The Townsville-Burdekin region has the highest number of exotic species in Australia. Not surprisingly, these new finds are causing a significant redirection of research effort from native to exotic fishes as we attempt to deal with the issue.

From

**Damien Burrows**

## THE MURRAY-DARLING FRESHWATER RESEARCH CENTRE

**We've Arrived**

After a hectic few months, the Albury crew are beginning to settle into their Wodonga abode. Postal and Street Details as below:

MDFRC, PO Box 991, WODONGA VIC 3689
Fax: (02) 6059 7531
Please Note that all phone numbers and email addresses have been retained. Switchboard phone number is (02) 6058 2300; email: Firstname.Surname@csiro.au

MDFRC
University Drive (via Main Gate on McKoy Street)
La Trobe University Albury-Wodonga Campus
WODONGA VIC 3690

**2005 World Wetlands Day Activities**

Wednesday 2nd February 2005 marked the 34th year of the signing of the Convention on Wetlands on 2nd February 1971, in the Iranian city of Ramsar on the shores of the Caspian Sea. MDFRC Albury hosted a visit by Senator The Hon. Richard Colbeck (Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry) to officially launch World Wetlands Day in the region, and to announce the Australian Government's continued funding for the MDFRC Albury for 2004-05. The theme for World Wetlands Day 2005 was 'Cultural and Biological Diversity of Wetlands'.

The Lower Basin Laboratory at Mildura, in conjunction with the Mallee CMA and other agencies, ran the Treasure Hunt at Kings Billabong on 13th February. **Rebecca Keating, Shaun Meredith, Iain Ellis, Sally Muston, Susie Ho** and **Helen Missen** manned our fish activity and treasure hunt tables. 140 children participated in the Treasure Hunt and had a great time making their way around five different activities including fish, reptiles, vegetation, water bugs and indigenous displays. The children also had the opportunity to collect bugs from the billabong to replenish Darren Wilson's (MCMA) bug display. Approx. 400 people attended the day, The Lions Club provided a free BBQ, Trentham Estate provided free wine tasting, and everyone enjoyed the entertainment of the local jazz band '*Swing Shift*'. There were also face-painting and indigenous activities with boomerang and didgeridoo displays

**Darren Baldwin** is currently in the USA until 10 March. He attended the American Society of Limnology and Oceanography (ASLO) 2005 Aquatic Sciences Meeting, held at Salt Lake City, Utah from 20 to 25 February, where he presented a paper on "Impact of saline groundwater intrusions on anaerobic biogeochemical processes in sediments of freshwater floodplain wetlands" (co-authored by Gavin Rees, Alison Mitchell and Garth Watson). He is then visiting colleagues at South Florida Water Management District at the University of Florida,

The **eWater CRC** website is now available at both urls below: http://www.ewatercrc.com.au OR http://ewatercrc.com.au

**Welcome**

A big welcome to two little MDFRCers: Casper Thomas Kennelly McCarthy (son for **Bernard McCarthy**) born on 16 January, and Tilka Wheal (daughter for **Michelle Bald**) born on 11 February.

Welcome also to **Rebecca Keating** who completed her Bachelor of Environmental Science (Honours) at Monash University in Clayton, Melb where she looked at developing a spatial habitat model, using GIS for an endangered marsupial, the Long-nosed Potoroo. After that, she travelled o/s, then commenced at Water ECOScience in Melbourne where she worked as an Aquatic Technician/Biologist looking at Zooplankton and Algae. She was there for about 18 months, before applying and getting her position at the LBL, and moved to Mildura seven weeks ago. At the LBL she is working on Knowledge Exchange for two days (taking over what Sylvia did: Riverwatch secretary, speaking to school groups, community activities, media releases etc.) and on the other three days, she is working as an Aquatic Technician on the Living Murray Project (led by **Oliver Scholz**).

Also welcome to **Adam Logan** who has joined the NBL staff, working as a Research Assistant on the *Icon Sites Project*. Adam completed a degree in Biology from Central Queensland Uni, and spent time working as a Customs Officer and then researching Near Infra Red Spectroscopy as a plant health tool. More recently he has been managing Nutrilab, a soil and plant tissue analysis facility. The Icon Sites Project is reviewing existing knowledge of key ecological assets in the northern MDB with a view to identifying knowledge gaps and key areas of research. The project requires engagement with agency staff and researchers from research institutions to gather and review the existing information, including universities, DIPNR, QLD NR&M, and NSW National Parks and Wildlife Service. After this information has been collated, we plan to undertake surveys of the flora and fauna present at key sites to fill critical knowledge gaps. Survey methods and the number of sites examined will depend on the information required and the funding available in the second stage of the project.

**Bon Voyage – Sylvs and Nicko from Mildura**

"Well, we start off on our adventure when we fly out of Aussie Land on the 24th January and head to Cape Town in South Africa. We'll be doing some fish and river research there at the University of Cape Town for a month or so and then heading to Kenya for some wildlife trekking for a month. We then go to Europe and drink lots of vodka with my relies in Poland and eat lots there, and we'll also do the rest of Europe including France, Germany, Greece, Italy etc etc.

Following Europe we're going to jet to London and Glasgow and work in freshwater fisheries there for a few months before heading to Canada to stay on a 'ranch' and ride some horses. Following Canada we'll do Mexico with lots of Tequilla and Corona beer action, and then to finish off we're going to do Thailand, Vietnam and Singapore."

From

**Rhonda Sinclair**

## FRESHWATER ECOLOGY, ARTHUR RYLAH INSTITUTE, DSE

As I missed the December newsletter (poor Rhonda was too overworked and stressed to notice my contribution - talk about a headless chook!!) I will include the December blurb as well.

**Shanaugh McKay, Phil Papas, Bill Dixon, David Crook, Wayne Koster, Ivor Stuart** and of course the multitalented **Sabine Schreiber** attended the ASL congress in Adelaide and from all reports it was another successful venture. It's been so busy that worthwhile gossip from the congress has been hard to come by - shame really.

The SARDI wader safety presentation at ASL sounded great and a worthy winner. Freshwater Ecology devised a wader proficiency course that all staff must complete to work in the field. This has been in place for about 18 months. Basically we must swim fully clothed in our waders for 50m in a swimming pool with two onlookers. The looks on the faces of the people out for their day's swim are priceless!!

**Di Crowther** was unable to attend the congress, as when the abstracts were due she was too busy sampling the waters of Scotland, Croatia, Vietnam and Laos. Recommendations from the trip: watching salmon migrate up waterfalls in the Scottish Highlands, swimming in Nessie (Loch Ness to those not in the know!), travelling on the Mekong river in high flows and visiting Plitvice Lakes World Heritage National Park in Croatia. Naturally the sampling of the wonderful beers on offer in each country was a temptation that could not be turned down! Recommended labels are Ojuscko Pivo, Beer Lao and the Edradour single malt from Scotland is not a bad drop either!

The Wetlands, Biodiversity, Management and Salinity Project team (**Sabine El Presidente, Michael Smith, Michele Kohout, Keely Smith, Ruth Lennie** and **Changhao Jin**) have finally got their feet thoroughly wet and sometimes salty in their recent survey of around 60 wetlands in the Wimmera. They were ably assisted by helpers from close (Peter, Paul, Kim, Stephen, and Don from Longeronong College, Horsham) and afar (Stuart, Alecia, Belinda, Damien, Dillan, Heidi, and Nathan). They sampled anything they could find, including the viscosity of the local mud and strength of local tractors in pulling field vehicles. Now they are immersed in samples and data, a joy that they have attempted to share with some of you at Monash, in Albury and in Adelaide! To their aid has now come Derek Turnbull, who has left Leon Barmuta's group in Tasmania for the heights of Brown Street, Heidelberg. Welcome! Derek will soon be venturing out into the Victorian countryside in search for that elusive case study field experiment. Sabine and Charles continue to find ways of examining the spread of aquatic invasive species and some exciting possibilities with color, maps and metapopulation simulations (in the absence of data we simulate is their current motto – it is a modelling project after all!!) are starting to emerge.

A big welcome from Freshwater Ecology to **David Bryant**. Dave left WSL to sample the buggy waters of Freshwater Ecology at ARI. So far Dave has undertaken a 4WD course, a wader safety course, workplace obligations course, etc etc. We are sure he will be over the obligatory courses very soon and get stuck into some serious work! Oh did I forget to mention in between courses Dave has actually been working on some ESAI productive grazing, healthy rivers samples taken from grazed and fenced riparian zones across the southwest and Gippsland areas of Victoria. He will soon be immersed in the masses of fieldwork just around the corner including sampling the numerous sites in the Campaspe and Broken Catchments for the Sustainable Rivers Audit. He is also currently enjoying the delights our wonderful coffee machine has to offer!

Shanaugh McKay and Di recently got stuck into small streams in the Bogong High Plains to search for the threatened alpine stonefly, *Thaumatoperla alpina*. The team was ably assisted by Cass Bryce (LaTrobe University, Wodonga) and managed to find the lovely critters at two new sites. Meanwhile the cold of the High Plains in February must have rattled Shanaugh as she is now leisurely sampling the wonders of Thailand, Laos and Vietnam (I for one am extremely jealous!!!!).

**Phil Papas** has been so busy on the index of wetland condition (NAP project) that we temporarily lost him to the office in town (must admit the place has been a lot quieter without him!!). Trials of the wetland assessment system will be undertaken soon at a wetland near you. Phil is now taking a well earned break in his home turf of WA and will return in early March.

ARI was recently visited by Kurt Fausch from Colorado State University, who gave an inspiring talk on Riverscapes, biotic invasions, and food webs: revealing connections among streams, fish, and riparian forests across multiple scales. Shanaugh McKay and Alison King in particular could relate to the landscape scale-sized equipment and associated challenges!!

A huge thankyou goes to Rhonda for all her superb effort putting the newsletter together *(Eds Note: You little crawler, considering the comments in the first paragraph).* A big welcome and good luck to Emma Wauchope as the new editor.

From

**Di Crowther and Sabine Shreiber**

## FRESHWATER ECOLOGY RESEARCH GROUP, SCHOOL OF ANTHROPOLOGY, GEOGRAPHY AND ENVIRONMENTAL STUDIES (SAGES) UNIVERSITY OF MELBOURNE

**Ashley Macqueen** is busy investigating the effects of disturbance on macroinvertebrates and algae for his Honours thesis, and is most relieved to have rescued his experiment from the recent 1 in 100 year flood! **Bec Lillie** is investigating patterns of oviposition by macroinvertebrates in sand slugged sections of the lowland streams of the Granite Creeks area. She has surveyed a great deal of woody debris of various shapes sizes and is testing experimentally the potential cues females may respond to when determining where to lay eggs. After a brief stint in consulting, **Jane Catford** saw the light and headed back to uni to start a PhD in SAGES in July 2004. She is examining the impact of an altered flooding regime on indigenous and non-indigenous plant species in floodplain wetlands along the Murray and Ovens River floodplains. It is hoped that this research will indicate whether there is the potential to use water regime management as an indirect way of managing riparian weed populations. **Dave Ryan's** been looking at the ecological and hydraulic role of reeds. **Lucy Nairn** recently attended the British Phycological Society meeting in January, and was very frightened to discover what happens when you combine the oddness of people who study algae with the innate eccentricities of the British. It has spurred her on, and she is trying to finish writing up her PhD thesis on the ecology of freshwater macroalgae, based at the Royal Botanic Gardens in Sydney, as quickly as possible. **Deb Thomas** is also in the throes of writing up her PhD about stream herbivores, their effects on algae, and the factors explaining their distributions.

**Rob Hale** is looking at the influence of environmental cues on variations in the number of diadromous galaxiids returning to streams in the Otways, for his PhD. He's conducting choice experiments to examine whether fish can choose between different waters, possibly as a mechanism for river mouth selection. **Nicole Barbee** is heading up a collaboration between **Barb Downes** and **Steve Swearer** (from Zoology at Melbourne Uni) addressing the role of long-distance dispersal vs local retention to the maintenance of riverine populations of the diadromous common galaxiid, *Galaxias maculatus*. One of their aims is to shed some light on the implications of estuary mouth closures on the population replenishment of this and other migratory fish species.

From

**Deb Thomas** [d.thomas1@pgrad.unimelb.edu.au]

## AQUATIC ECOSYSTEM RESEARCH LABORATORY
## MURDOCH UNIVERSITY

**Jane Chambers** and **Jenny Davis** are about to begin supervising a plethora of new Honours students. **Tom Staveley** and **Emma Ligtermoet** will be working on tropical river systems in Sarawak. Tom will look at how land use effects water quality and Emma will study the effect of riparian vegetation on water quality and resulting implications for improving water quality management. **Kirsi Kauhanen** is looking at factors that promote poor water quality and nuisance midge and mosquito problems at constructed wetlands on the Swan Coastal Plain. **Renee Kruger** look at nutrient loads in stormwater entering Bibra Lake and how water quality is influenced by the current trend of lower than average rainfall in the Perth Metropolitan area. We also welcome **Alison McGilvray** and **Naomi Kerp** with more news on their Honours projects in the next issue. **Vicki Hartill** is continuing her Honours work looking at the effects of salinity on wetland riparian vegetation and has also won a Men of the Trees-Shirley Fyfe scholarship to help fund the project. Vicki has also been nominated for the best 'Oh I think we might be bogged award' for getting a 4WD stuck in the mud a long way from home, having to sleep the night in the back and being rescued by a CALM ranger the next day.

**Juan Chen's** PhD *Sediment Remediation as a Technique for Restoring Eutrophic wetlands and controlling nuisance Chironomidae* has been accepted and she has taken up a position as an Environmental Officer at the Water Corporation of Western Australia. **Lien Sim** is busily analysing data and writing up her PhD research on the effects of increased salinity on macrophyte and microbial communities in wetlands affected by secondary salinisation. **Joanne O'Connor** is continuing her PhD work, comparing ecological processes over a wetting and drying cycle, in saline lake systems along a 500km transect, from the coast near Perth to east of the Wheatbelt.

**Karin Strehlow** is continuing her Postdoctoral research with Jenny Davis, and is looking at the downstream impacts of deep drainage on invertebrates in the wheatbelt. **Suzi Wild** is busy peering down the microscope at the genitalia of mites and other fascinating features of aquatic bugs, for a biomonitoring report on 10 wetlands on the Jandakot Mound. **Peter Novak** is working with Jane Chambers looking at barriers affecting the restoration of submerged macrophytes in the Lower Vasse River. **Christina Mykytiuk**, (ex Murdoch Honours student) has been employed by WWF and is working as a Wetland Watch project officer.

From

**Suzi Wild**

## HOBART, TASMANIA

And the light shines once again on Hobart in eager participation of the 44th ASL Congress in December! However, given that it is a few months away yet and several months have passed since our last update, what have we been up to? Well, there is nothing quite as productive as a summer in Hobart...

**University of Tasmania:**
**Leon Barmuta** and **Menna Jones** are happy to inform us that Myles is a very sleepy addition to their household, congratulations guys. Myles and Mungo, have already joined postgrads for the odd day in the field, with mud, and more mud. Leon has even managed to return to work in record time, must be that new influx of Honours students. The Freshwater Lab welcomes **Megan Howard** (Honours) who will be working on shredder leaf selectivity. Meanwhile, further congratulations are due to **Ally Dalton** on the healthy arrival of Jessy. Ally managed to start his Masters and complete his first round of urban frog pond/mosquito sampling before Jessy joined us. He also promises to grace us all soon with some very interesting results on the spread of chitrid fungus in Tassie.

We say farewell and good luck to our recently awarded Honours graduates. **Anne Watson** worked on litter transport dynamics in headwater streams, while **Tim Davis** untangled the ecology of saddled galaxids (*Galaxias tanycephalus*) in Woods Lake. **Scott Hardie** was happy to help Tim out, but continues to prefer golden galaxids (*Galaxias auratus*) in his PhD endeavours, when not at work with Inland Fisheries that is. Our other fish body, **Rick Stuart-Smith** is keeping up the PhD productivity averages in the lab with a whole bunch of successful tank experiments investigating golden galaxid feeding dynamics. **John Gooderham** continues to chew through that mountain of invertebrate samples that seems to self-propagate, not unlike most PhD collections, and hence is enjoying the odd foray into the Gordon with **Peter Davies**. Similarly, **Jo Clapcott** is rapidly approaching that end of the PhD involving a whole lot of computer screen time having finished her final field experiment in February.

**Freshwater Systems:**
**Peter Davies, Laurie Cook** and **Tom Sloane** are industriously producing their award winning lumps of concrete. Fieldwork includes the continued search for large not-so-mythical beasts (*Astacopsis gouldi*) in the north, investigating button grass plain waterholes near Lake St Clair, and jumping in the helicopter for the odd Gordon River jaunt, oh how hard.

**Water Resources Division, DPIWE:**
**Tom Krasnicki** and **Dave Horner** have recently finished training up community groups on river health monitoring using AusRivAS; **Chris Cleary** has done the same for water quality for Waterwatch. There are new staff: **Kate Hoyle** in water quality, and two trainees have started in hydrometrics and water quality monitoring: **James Mancey** and **Sam Walker**. **John Whittington** has spread his wings and is currently acting as general manager for the broader, hotter, Resource Management and Conservation, and the rest of the staff are madly trying to deal with hydrological modelling and water management plans. The thing that's of major interest in terms of DPIWE stuff is probably the CFEV project - it's nearly done!

**Most importantly:** Danielle Warfe, Joanne Clapcott and John Gooderham have stepped up to bat for the organisation of said 44th ASL Congress (28 Nov – 2 Dec). Keep your eyes on the ASL webpage and future newsletters for more details as they become available.

From

**Jo Clapcott and John Gooderham**
University of Tasmania

## Australian Limnology in Antarctica

Australia has a long tradition of Antarctic limnology. From the early 1970s a group led by Harry Burton of the Australian Antarctic Division in Hobart undertook important studies on the lakes of the Vestfold Hills that surround Australia's Davis Station. Many of these lakes are saline and meromictic, while others are only slightly mineralized and ultraoligotrophic. The area has been described as a limnologist's playground due to the lakes' variety and accessibility. With Harry's move into seal research in the early 1990s Australian research on Antarctic lakes faded away, with the exception of some studies of lake sediments for records of climate change. Researchers from other countries, however, have continued to visit the lakes of the Vestfold Hills and nearby areas.

In 2002 we established a research group in the Institute of Antarctic and Southern Ocean Studies and the School of Zoology, University of Tasmania, which aimed in part to reinvigorate Australian Antarctic limnology. We obtained a large ARC grant entitled 'Antarctic freshwater lake fauna: Palaeobiogeography, palaeoecology and applications to climate change studies'. This project is described further below. The group is also undertaking basic limnological research in areas of Antarctica where the lakes are poorly known. A field team has just returned from a summer season spent in the Framnes Mountains near Australia's Mawson Station. Most of the lakes in these mountains are epiglacial; that is located in the vee between the steep-sided mountains and the polar ice caps. The lakes are up to 120 m deep and permanently capped by over 4 metres of ice. The lakes are fresh, and are uniformly cold throughout (within 0.1 °C of freezing in all cases). Quite surprisingly they are highly alkaline, with pH>10. Not much lives in the lakes, though filamentous cyanobacteria are present in the water columns. Another field team will visit the Stillwell Hills, a coastal outcrop 150 km west of Mawson previously unvisited by limnologists, during the 2005 winter.

Many Antarctic freshwater lakes contain a range of invertebrate animals – including tardigrades, rotifers, nematodes and crustacea – that graze on bacteria, algae and other small organisms. The origins of this fauna are unclear. Our ARC project is aimed at solving this problem.

Some people argue that complete glaciation of the Antarctic continent at the last glacial maximum destroyed all freshwater habitats and that all the species currently present have colonised Antarctica from more temperate areas, such as South America, over the last 12000 years. However, glaciation is now known not to have been complete. It is possible then that some freshwater habitats continued to exist through the ice ages, and that animals that survived in these refuges have spread in more recent times. If the latter process occurred, some of the fauna present in Antarctic lakes may have been associated with Antarctica for a very long time.

A simple approach to clarifying the situation is to look at current biogeography. For example, the copepod *Boeckella poppei* occurs in Patagonia and along the western side of the Antarctic Peninsula. It is easy to conclude that it has colonised Antarctica from South America. However, a further, isolated, population of *Boeckella poppei* occurs in lakes in the Prince Charles Mountains, many thousands of kilometres from the Antarctic Peninsula. How did this population get there? One suggestion is that human activity has resulted in the transfer. But a detailed study of the morphology of animals in the Prince Charles Mountains' lakes showed that each population is slightly different from the others and from animals from the Antarctic Peninsula and South America. This indicates that they have been separated from each other long enough to evolve individual characteristics. These findings argue for the occurrence of *Boeckella poppei* on the Antarctic continent for a significant time span. It is possible that the current distribution is derived from both colonisation from South America and vicariance on the continent.

Another approach to the question is to study the distribution of animal remains in sediments from freshwater lakes. Through study of sediment cores from lakes in three ice-free regions in East Antarctica, as well as from the Antarctic Peninsula, we are detecting several trends. Firstly, many species currently found in the lakes are present in the oldest sediments (typically 5000 – 10 000 years old), suggesting that they reached the lakes soon after the lakes were formed. Secondly, biodiversity has in some cases decreased with time, indicating that an initial pulse of invasions has not continued. These results suggest a local source for the fauna, rather than an intercontinental invasion.

We are also using molecular genetic techniques to look at community changes in lakes through time. So far we have been successful at amplifying ancient copepod DNA from lake sediments, and we now hope to extend this method to other taxa. This method complements microscopic techniques by allowing identification of species that do not leave identifiable remains.

For more information on this research, contact John Gibson at John.Gibson@utas.edu.au.

From

**John Gibson and Kerrie Swadling**
School of Zoology and IASOS, University of Tasmania.

## SCHOOL OF ECOLOGY & ENVIRONMENT, DEAKIN UNIVERSITY, WARRNAMBOOL

As another year gets underway several projects are finishing. **Peter Lind**, **Brad Mitchell** and **Belinda Robson** have finished the final report on 5 years of post-environmental flows monitoring in the Glenelg and Wimmera Rivers. **Belinda Robson**, **Ty Matthews** and **Peter Lind** are finalising their report for Glenelg-Hopkins CMA on the role of drought refuges for sustaining algal communities in Grampians streams. **Ed Chester**, **Al Danger** and **Travis Howson** are all furiously writing up their PhDs.

Some new freshwater projects are also beginning. **Steve Wickson** has started honours looking at the genetics of *Anisocentropus* in western Victoria with **Belinda Robson** and **Chris Austin**. Steve is hoping to relate genetic patterns to adult morphology, to determine how many species are present and perhaps to enable us to separate the larvae of different species.

**Peter**, **Brad**, **Ty** and **Belinda** have commenced a project with Glenelg-Hopkins CMA looking at the biodiversity of sand slugs and sand slug created wetlands in the Glenelg River. We have already had occasional glimpses of our new Professor, **Gerry Quinn**, who will officially arrive here in May and we are greatly looking forward to him joining the team.

From

**Belinda Robson**

## CENTRE FOR RIVERINE LANDSCAPES
## GRIFFITH UNIVERSITY, BRISBANE

CRL welcomes **Amanda Posselt** and **Heidi Millington** who are starting their PhD's. **Amanda** will be examining the effects of nutrients on toxic alage in reservoirs, supervised by **Michele Burford** and **Glen Shaw** (Entox). **Heidi** will be examining links between hydrology and ecological response in freshwater systems with **Stuart Bunn**.

**Michele Burford**, and **Jon Olley** (CSIRO Land and Water) were recently successful in gaining a three-year ARC Linkage grant on nutrient transformations in rivers and reservoirs in southeast Queensland, with industry partners Healthy waterways and SEQ Water.

**Andrew Cook** and **Cathy Leigh** have just returned from a field trip to Weipa to collect food web samples and water quality data in the Wembley Estuary, as part of a broader project investigating ecological and hydrological processes in the Gulf Rivers. This particular project investigates the role of freshwater processes in promoting coastal productivity in the Gulf. A return trip is planned in the dry season.

**Elvio Medeiros** has returned to Brazil having completed his PhD thesis and becoming a proud new parent, along with Fernanda. Baby Alice is doing well and **Elvio** is keen to hear from from his examiners as he looks for Post-doc research opportunities.

**Kurt Fausch**, Colorado State University and **Tom Turner**, University of New Mexico were recent visitors to CRL and both presented informative and entertaining seminars.

**Nerida Beard** who has spent the past two years working on the CRCFE Dryland Refugium and LWA Nutrient projects will be leaving shortly for Alice Springs. **Nerida** has accepted the position of "Research Engineer" in water security and community development with remote indigenous communities through the Centre for Appropriate Technology (CAT). We wish **Nerida** well in her new position.

From

**Stephen (Harry) Balcombe**

## POSTCARD

Sob, Sob.

**There is no Postcard this Edition, BUT stay tuned!!**

# THE AUSTRALIAN TROPICAL RIVERS GROUP: A VISION FOR TROPICAL RIVERS

17 February 2005.

The Australian Tropical Rivers Group (ATRG) is an independent group of eminent researchers with extensive knowledge and experience of river ecology in Northern Australia. The group is working with landholders, communities, industries and governments to develop solutions that secure Australia's tropical rivers. The group believes a vision for the north must be knowledge-based if it is to manage these assets of national and international importance.

The members of the group are:

- Professor Angela Arthington, Centre for Riverine Landscapes, Griffith University;
- Professor Stuart Bunn, Director, Centre for Riverine Landscapes, Griffith University;
- Professor Peter Davies, Centre of Excellence in Natural Resources Management, University of Western Australia;
- Dr Max Finlayson, National Centre for Tropical Wetlands Research, Darwin, and from March, the International Water Management Institute, Colombo, Sri Lanka;
- Professor Stephen Garnett, Professor of Tropical Knowledge, Charles Darwin University;
- Professor Arthur Georges, Director, Applied Ecology Research Group, University of Canberra;
- Professor Richard Kingsford, Chair of Environment Science, University of NSW;
- Professor Richard Pearson, School of Tropical Biology, James Cook University;
- Professor Robert Wasson, Deputy Vice-Chancellor Research, Charles Darwin University; and
- Dr John Williams, Former Chief, CSIRO Land and Water, and member of the Wentworth Group of Concerned Scientists.

The ATRG is convened by Dr Stuart Blanch, Freshwater Manager with WWF-Australia.

The group highlights the importance of maintaining the health and ecosystem services of Australia's tropical rivers, which hold 70% of Australia's available freshwater. Winding across the 91 catchments and nearly 200 million hectares between Rockhampton and Exmouth, are 100,000 km of rivers and streams. Over three-quarters of these catchments have no big dams or weirs - a stark comparison to the Murray Darling Basin.

"Australians need to form partnerships with traditional owners and other landholders to manage these priceless assets, and address management issues such as weeds, over-grazing and unsustainable water and land use from agricultural expansion", said Dr John Williams.

"The National Water Initiative provides a great opportunity to identify and protect river systems of high conservation value across the north, and redress over-allocated and potentially over-allocated northern water resources, such as in the irrigation area at Katherine in the Daly catchment, Northern Territory."

"Australia literally cannot afford to repeat the mistakes of the Murray Darling Basin across the north. River systems of high conservation value need to be identified and managed to protect their ecological integrity and ecosystem services", said Dr Williams.

In the same manner that Australians, from all walks of life, came together to develop the Murray Darling Basin and Snowy Schemes a half century ago in what was hailed as nation-building, we now have a great opportunity - indeed, responsibility - to ensure our northern frontier rivers are looked after for the benefit of all Australians. This is real nation building for the twenty-first century. The ATRG is rising to that challenge and seeks to work together with industries, landholders, communities, the Australian Government and the governments of Western Australia, the Northern Territory and Queensland.

The group's vision for securing Australia's tropical rivers is available at: http://www.wwf.org.au/News_and_information/Publications/PDF/Speech_presentation/securing_the_north.pdf.

A statement regarding the proposed Kimberley to Perth canal is also available at http://www.wwf.org.au/News_and_information/News_room/viewnews.php?news_id=186

The Group is currently preparing a statement for release mid-year which will spell out key ecological and management principles for tropical rivers.

For further information, contact Stuart Blanch at the WWF-Australia on 02 9281 5515 or <sblanch@wwf.org.au>.

# INFORMATION FROM AND FOR MEMBERS

## Why we should all acknowledge stream hydrographs

Recently at the ASL AGM, I very clumsily brought up the subject of acknowledgment of hydrographs in scientific presentations. I thought more explanation might help. Hydrological data is generally a free or paid for public service provided by government agencies or corporatised commercial water authorities. As such it is not often acknowledged in presentations of hydrographs. Other than the intellectual property issue of publicly funded data collection, there is a very real scientific imperative to acknowledge hydrographs.

Without acknowledgment, hydrographic services become invisible to high level managers and the community. Consequently, where the work is not seen as valuable, several related risks emerge to continued good quality and extensive data collection.

1. The occupation is not seen as a career option, resulting in an aging and smaller workforce, with hydrographers not replaced as they retire or leave, putting pressure on continuation of gauging stations that are not part of the commercial allocation of water.
2. Gauging stations cannot be maintained at the same intensity, resulting in a possible loss of integrity of the data, which is also a good reason to contact the data collector for advice on its quality.
3. There is continued pressure for hydrographic services to be taken over by commercial water allocation authorities, who will close 'unnecessary' gauging stations, and/or charge full cost recovery for data. Many of the current non-commercial gauging stations are used for a range of important but not commercial projects related to the ecology of rivers and floodplains. They produce data important to natural resources management rather than specifically water distribution. If they are closed, many of these projects and natural resources management will suffer loss of a strong hydrological basis. In addition, water distribution information will also suffer as knowledge and understanding of the processes of losses and gains within river systems is depleted.

Hydrographic data is collected and managed by a range of professional staff, who identify suitable sites, install the hardware and electronics and manage data collection, processing and analysis. Their efforts as agency staff are worth acknowledging.

*Lorraine Hardwick*
*1 Michael Avenue*
*Wagga Wagga NSW 2650*

**Barmah Forest: Indigenous Heritage, Ecological Challenge**

A Conference on the BARMAH FOREST: INDIGENOUS HERITAGE, ECOLOGICAL CHALLENGE is being organized by The Royal Society of Victoria, for 18 and 19 June 2005 in Melbourne.

The Barmah-Millewa Forest is an area of great ecological significance and interest. For decades it has been the focus of much archaeological, historical and scientific research. The Victorian Environmental Assessment Council is about to begin its Riverine Red Gum Forests Investigation, after which decisions will be made as to the future of these forests. The conference is a response to the great degree of interest in this remarkable area.

Please click on this link for an invitation to the Barmah Conference) http://www-personal.monash.edu.au/~ladson/BarmahInvite5.doc (or for a pdf version of the invitation) http://www-personal.monash.edu.au/~ladson/BarmahInvite5.pdf

*Tony Ladson (tony.ladson@eng.monash.edu.au)*

**ASL Policy Document on Aquatic Protected Areas: Report from the ASL Representative Reserves Working Group**

In the later months of 2000 the ASL Executive recommended the formation of an internal working group to examine the issue of the use of protected areas (particularly those conserving representative areas) in the management of inland aquatic ecosystems.

The ASL Executive appointed Jon Nevill as convenor, and Deb Nias as policy officer. The working group, which was restricted to ASL members, created a wider reference group which covered both ASL and other experts, including those with expertise in terrestrial and marine protected areas. The membership of the Working Group was formed from volunteers responding to a posting on the ASL email forum. While the reference group was open to any interested person, in practice members of that group joined largely as a result of invitation. The Working Group attempted without success to include indigenous representatives on the reference group.

The Working Group had two primary objectives: (a) to prepare a discussion paper on the issue, and (b) to examine whether the ASL should develop an internal policy statement relating to protected areas, and make an appropriate recommendation to the ASL Executive. The Working Group completed both objectives by late in 2003. The Working Group recommended to the ASL Executive that the ASL should publish a policy statement on the use of inland aquatic protected areas. The minutes of the ASL AGM held at Warrnambool in December 2003 state that a short ASL policy document should be prepared based on the 270-page discussion paper. A number of minor editing issues delayed closure of the project until March 2004.

Following discussions between the working group and the ASL Executive, the 270-page discussion paper was published independently of the ASL in hard copy on 1 March 2004. The report, titled "The Australian Freshwater Protected Area Resourcebook" was edited by Jon Nevill and Ngaire Phillips - core members of the working group. Funding to support publication of the report came from WWF Australia and the University of New England.

Appendix 11 of the discussion paper lists the membership of the working and reference groups. Electronic copies are available from http://www.ids.org.au/~cnevill/freshwater.htm. The report made a number of recommendations, largely targeted at State water management agencies. Several of these recommendations reflect a view that protected areas are a valuable management tool.

In line with the decision made at the 2003 ASL AGM, a short draft policy statement was prepared by the Working Group and passed to the Executive in February 2004. The Executive are in the process of reviewing this draft. At the last meeting of the Executive in February 2005, an expectation was expressed that the policy would be ready in final form by mid-March 2005.

While several other ASL policy documents have been published in the form of a folded A3 colour brochure with illustrations, the proposed method of publication is (in line with the society moving towards web-based newsletters and policies) for the *Aquatic Protected Area Policy* to be published as a html text file on the ASL website.

*Jon Nevill February 2005*
*Convenor of the former ASL Representative Reserves Working Group (2000 - 2004)*
*jon_nevill@yahoo.com.au*

**Note from Chris Madden**

G'day Rhonda,
A small bit of news from SA. I no longer work at AWQC but have bought a microscope to work from home. I hope to specialise in Diptera IDs but will do anything for a crust at the moment. I hope to get time to write a chironomid larval genus key using whole body features (waiting on news of an ABRS grant to help fund this) and present at a future Taxonomic workshop.

*Chris Madden*
*Freshwater macroinvertebrates*
*Identifications, field work, ecological reporting, statistical analysis, Diptera specialist*
*28 Kingswood Crescent*
*Lockleys, SA, 5032*
*Phone (08) 8356 5031*
*Mobile 0414 976 657*

**Malaysian Freshwater Invertebrates – flyer insert**

There should be a A4 flyer advertising a new book on Malaysian Freshwater Invertebrates edited by Cathy Yule (one of ASL's overseas members!), inserted in the hard copy of this edition of the newsletter. If any members who receive an electronic copy of the newsletter and would like a copy of the flyer, drop me an email at Rhonda.Sinclair@csiro.au

**NEW ZEALAND – Rivers of National Importance**

For those interested in the NZ project, a collection of documents, some for comment, is available at: http://www.mfe.govt.nz/issues/water/prog-action/index.html

**Note from Gerry Quinn**

After 16 years at Monash University, Gerry Quinn (GQ) is having his "seachange", and will take up the Chair in Marine Biology at Deakin University Warrnambool on May 2. Good luck GQ.

**Frontiers in Ecology and Environment**

Non-Ecological Society of America members may be interested in this special issue of Frontiers in Ecology and Environment.

Due to the high volume of interest in the February Special Issue of Frontiers, "Visions for an ecologically sustainable future", ESA has decided to make the entire issue available online to the public. See: http://www.frontiersinecology.org/specialissue.html

**2005 Banksia Environmental Awards**

The Banksia Awards recognises individuals, community groups, businesses and government organisations for leadership and excellence in protecting Australia's environment. Each year, the theme corresponds to the United Nation's Year of Declarations, or a national initiative. This year's them is Environmental Education, covering formal education, public awareness and training and the process by which human beings and societies can reach their full potential. Early bird entries are due 25 February, 2005, closing date, 24 March, 2005. For more information go to http://www.banksiafdn.com/index.php?page=10

**2005 Australian Museum Eureka Prizes**

For the past 16 years the Australian Museum Eureka Prizes have been rewarding outstanding contributions to Australian science. This year is no exception with a record 23 Prizes on offer totaling almost $250,000 cash and prizes.

There are 10 prizes for scientific research which include new prizes for bioinformatics research and research which replaces the use of animals. The Eureka Prizes are also the largest national award scheme for research into critical environmental and sustainability issues facing Australia. A very significant portion of the innovative research being undertaken in CRCs across Australia is covered by the Eureka research prizes. We urge you to be part of Australia's largest and most prestigious science awards by entering your team or your colleagues for an Australian Museum Eureka Prize.

The Prizes for scientific research are:

- $10,000 Australian Catholic University Eureka Prize for Research in Ethics
- $10,000 Australian Skeptics Eureka Prize for Critical Thinking
- $10,000 Botanic Gardens Trust Eureka Prize for Inspiring Science
- $10,000 Land & Water Australia Eureka Prize for Water Research
- $10,000 NSW Ministry for Science and Medical Research Eureka Prize for Bioinformatics
- $10,000 Royal Societies of Australia Eureka Prize for Interdisciplinary Scientific Research
- $10,000 Sherman Eureka Prize for Environmental Research
- $10,000 University of New South Wales Prize for Scientific Research
- $10,000 Voiceless Eureka Prize for Research which Replaces the Use of Animals or Animal Products.

For further information and entry details go to www.amonline.net.au/eureka Entries in all prizes close on Friday 13 May 2005., and winners will be announced on 9 August 2005.

**2004 Selection Round: Successful CRCs**

*Australasian CRC for Interaction Design*, Information and Communication Technology Sector (Supplementary) - QLD CRC Programme funding: $1.65 million.
The new research programme will facilitate empirical studies of interactive television audience behaviour designed to better understand the human factors associated with their engagement with a wide variety of content. Audience research is the core activity of the programme which will then be translated into other initiatives including content production, application development and hardware solutions.
Contact: Professor Jeff Jones Phone (07) 3337 7821 Email: ji.jones@qut.edu.au

*Australasian Invasive Animal CRC*, Environment Sector (Developing from an existing CRC) - ACT CRC Programme funding: $29.64 million.
The Australasian Invasive Animal CRC will focus on solving invasive animal pest problems through the development of commercial outputs and a business partnership that brings together national and international skills in science, management, commerce and industry. Outcomes will help solve the prominent and costly impacts of invasive species on agriculture and the environment.
Contact: Dr Tony Peacock Phone: (02) 6242 1768 Email: tony.peacock@pestanimal.crc.org.au

*CAST CRC*, Manufacturing Technology Sector (Developing from an existing CRC) – QLD CRC Programme funding: $33.5 million.
The CAST CRC's research will provide competitive advantage to Australia's light metal industry. The focus will be on technologies for aluminium, magnesium and titanium producers and manufacturers of light weight transport applications. The CAST CRC has adopted a value chain approach providing innovations for base metal and specialist alloy producers, component and systems manufacturers, transport manufacturers, defence contractors and a broad range of SMEs. Research activities will focus on new applications, new processes, industry sustainability and strategic research. The CRC will integrate these new technologies throughout the full value chain to maximise commercial uptake, industry diffusion and return on investment.
Contact: Professor David StJohn Phone: (07) 3365 3574 Email: d.stjohn@cast.crc.org.au

*Cotton Catchment Communities CRC*, Agriculture and Rural Based Manufacturing Sector (Developing from an existing CRC) - NSW CRC Programme funding: $26.5 million The Cotton Catchment Communities CRC will create economic prosperity integrated with the sustainable use of natural resources by providing innovative knowledge that is adopted for the benefit of the Australian cotton industry, regional communities and Australia as a whole. Greater emphasis will be placed on water, natural resources, managing transgenic crops and commercial tools for growers. Value adding will also be a major theme, with a focus on the fibre and new opportunities associated with cotton seed oil and aquaculture.
Contact: Mr Guy Roth Phone: (02) 6799 1500 Email: guy.roth@csiro.au

*CRC for Advanced Automotive Technology*, Manufacturing Technology Sector (New) - Victoria CRC Programme funding: $38.35 million.
The CRC for Advanced Automotive Technology will provide the automotive industry with the opportunity to work with research providers in design, engineering and manufacturing research to enhance the industry's international competitiveness. The CRC will help the automotive industry to reduce concept-to-product cycle times through the introduction of paradigm shifts in process and production methodologies, improved manufacturing flexibility and efficiency and the development of new material systems to meet the challenges of weight reduction, increased safety and greater functionality. The CRC will also improve vehicle safety through delivering improvements in the crash worthiness of vehicles and new intelligent products/systems that provide increased comfort, performance and entertainment.
Contact: Dr Laurence Sparke Phone: (03) 9647 1111 Email: Laurie.Sparke@holden.com.au

*CRC for an Internationally Competitive Pork Industry*, Agriculture and Rural Based Manufacturing Sector (New) - SA CRC Programme funding: $25.75 million.
Research and development conducted by the CRC for an Internationally Competitive Pork Industry will result in reduced production costs for high-quality pork through more reliable and consistent protein and energy supplies via innovative grain production and through improved herd feed conversion efficiency. The demand for niche Australian pork products will be increased as a result of an enhanced capacity to deliver nutrients that promote the health and well-being of consumers via consumption of pork and pork products.

This will lead to improved confidence and investment resulting in the growth of the Australian pork industry.
Contact: Assoc Professor Robert van Barneveld Phone: (07) 5547 8611 Email: rob@barneveld.com.au

*CRC for Asthma and Airways*, Medical Science and Technology Sector (Developing from an existing CRC) - NSW CRC Programme funding: $26.44 million.
Asthma is one of the most prevalent chronic diseases and Australia has one of the highest incidences of asthma in the world. Despite this high prevalence, asthma remains a poorly understood disease, and there is a recognised need for more definitive diagnosis and more effective and safer asthma treatments. The CRC for Asthma and Airways will identify key pathways in asthma mechanisms involving unique sets of genes, inflammatory molecules and proteins that will underpin a rational commercial approach to the better use of existing treatments and the development of novel, improved therapeutic strategies for asthma. In addition, the CRC will improve our understanding of the environmental factors that influence the high and increasing rates of asthma with the goal of developing air quality guidelines and policies that will be implemented through state government partners.
Contact: Mr Philip Bert Phone: (02) 9036 3130 Email: philipb@asthma.crc.org.au

*CRC for Beef Genetic Technologies*, Agriculture and Rural Based Manufacturing Sector (Developing from an existing CRC) - NSW CRC Programme funding: $30 million.
The CRC for Beef Genetic Technologies will improve the capacity of the beef industry to deliver high quality beef to Australia's global markets using cattle of known genetic merit without compromising animal welfare or the environment. Beef yield will be enhanced and herd reproductive efficiency will be increased. Improvements in the efficiency of resource use will reduce production costs, minimise methane emissions and avoid chemical and antibiotic residues through precise application of knowledge about the genes controlling these attributes in cattle, their rumen micro-organisms and in parasites that affect cattle productivity.
Contact: Professor Bernie Bindon Phone: (02) 6773 3501 Email: bbindon@metz.une.edu.au

*CRC for Biomedical Imaging Development*, Medical Science and Technology Sector (New) - Victoria CRC Programme funding: $21.47 million.
Biomedical imaging is one of the key enabling tools that will make personalised medicine possible. A fundamental limit to the ability of clinicians to provide individualised medicine services is the specificity, sensitivity and resolution of the current imaging techniques and equipment. The CRC for Biomedical Imaging Development will produce new and improved radiopharmaceutical tracers with high specificity for cancer and neurological diseases, together with chemical processes for their on-site production and new detectors capable of significantly improved sensitivity and resolution.
Contact: Mr David Krenus Phone: (03) 9467 6277 Email: david@berthold.com.au

*CRC for Contamination Assessment and Remediation of the Environment*, Environment Sector (New) – SA CRC Programme funding: $30 million.
The goal of the CRC for Contamination Assessment and Remediation of the Environment is to develop a risk based approach to remediation leading to improved regulatory acceptance of commercially viable and cost-effective solutions to environmental contamination. A significant feature of the CRC's strategic research is the National Contaminated Sites Demonstration Programme (NCSDP). The NCSDP has been designed to solve difficult and challenging air, land and water contamination problems, involving site owners, regulators, consultants and research providers. The data generated during these studies will be used for further development of the Australian National Environmental Protection Measure. The CRC will develop monitoring tools for contaminant groups including heavy metals, petroleum hydrocarbons, industrial solvents, and persistent organics such as pesticides, explosives, and others such as asbestos.
Contact: Professor Ravi Naidu Phone: 0407 720 257 Email: Ravi.Naidu@unisa.edu.au

*CRC for Molecular Plant Breeding*, Agriculture and Rural Based Manufacturing Sector (Supplementary) - Victoria CRC Programme funding: $4.93 million.
By delivering quantum improvements in pasture, through providing the industry-desired target traits of both enhanced herbage quality and reduced pollen allergenicity, the Molecular Plant Breeding CRC will produce the world's first highly nutritious, highly digestible, hayfever-free pasture grasses. By extending the reach to additional key target species and by combining traits, thereby enhancing the global competitiveness of Australia's pastoral industries, the CRC will develop and penetrate world markets with Australian-owned technologies.
Contact: Dr Bryan Whan Phone: (03) 9479 1698 Email: mpb@molecularplantbreeding.com

*CRC for National Plant Biosecurity*, Agriculture and Rural Based Manufacturing Sector (New) - ACT CRC Programme funding: $20.5 million.
A number of pests and diseases pose a severe threat to Australian agriculture across a range of grain, horticultural and other plant industries. The CRC for National Plant Biosecurity aims to counteract the impact of emerging plant pests and diseases through the application of new technology and by integrating approaches across agencies and jurisdictions. The CRC's research and education programmes encompass all major aspects of biosecurity - prevention, diagnosis, surveillance and impact management. Deliverables from the CRC include risk analysis tools, diagnostics platforms, surveillance systems and rapid response systems. SMEs will assist in taking CRC products to market.
Contact: Dr Bill Roberts Phone: (02) 6260 4322 Email: admin@phau.com.au

*CRC for Polymers*, Manufacturing Technology Sector (Developing from an existing CRC) – Victoria CRC Programme funding: $32 million.
Polymers are rapidly replacing many traditional manufacturing materials such as steel. The comparative advantages of polymers over other materials include their low densities, range of mechanical properties, and ease of processing. They underpin a substantial proportion of Australian manufacturing, and are used to create products for a wide range of industries and a diverse range of applications.

The CRC for Polymers will conduct leading-edge research to deliver the technically advanced polymeric materials and polymer engineering required to transform Australian industries such as manufacturing, biotechnology, agriculture, and mining and energy.
Contact: Dr Ian Dagley Phone: (03) 9558 8111 Email: dagley@crcp.com.au

*CRC for Sustainable Forest Landscapes*, Agriculture and Rural Based Manufacturing Sector (Developing from an existing CRC) - TAS CRC Programme funding: $26.6 million.
The CRC for Sustainable Forest Landscapes will generate new technologies to apply to the management challenges faced across the entire forestry business chain - from site selection to delivery of wood at the mill gate. There will be a strong focus on the study of interactions between wood production systems and the wider environment, supporting the industry need for proof of sustainability. The CRC will focus on the production of fibre and solid wood from hardwood plantations ensuring a reliable supply of high-value wood. This will lead to greater market competitiveness for Australian wood products through an improved ability to grow a higher quality, more uniform resource from plantations of certified sustainability.
Contact: Professor Rod Griffin Phone: (03) 6226 7947 Email: CRCForestry@ffp.csiro.au

*e-Water CRC*, Environment Sector (Developing from an existing CRC) - ACT CRC Programme funding: $40.25 million.
The eWater CRC builds on the successes of two existing CRCs - Catchment Hydrology and Freshwater Ecology. This CRC will develop products that will allow both governments and private companies to deliver water of a higher quality, more efficiently and at vastly reduced costs. The CRC will take an integrated approach to water cycle management across urban and rural catchments, with a strong market orientation and commercial focus. The CRC will strive to be an international leader in the development, application and commercialisation of products for integrated water cycle management.
Contact: Professor Gary Jones Phone: (02) 6201 5167 Email: gjones@lake.canberra.edu.au

*Parker CRC for Integrated Hydrometallurgy Solutions*, Mining and Energy Sector (Developing from an existing CRC) - WA CRC Programme funding: $20 million.
Hydrometallurgy plays an essential role in the production of alumina, gold, zinc, nickel and copper. The Parker CRC for Integrated Hydrometallurgy Solutions will maximise the returns from Australia's mineral endowment by improving hydrometallurgical knowledge. The CRC will develop breakthrough technologies that have the potential to change the competitive basis of the whole industry, and make incremental improvements in current production technologies, effectively transferring research outputs to industry and developing the nation's expertise in hydrometallurgy.
Contact: Dr Steve Algie Phone: (08) 9385 9969 Email: algie@multiline.com.au

**Australian Research Network for Algal toxins**

ARNAT's (Australian Research Network for Algal toxins) http://www.aims.gov.au/arnat mission is to heighten communication between researchers whose interests are the toxic algae found in Australian waters. Such algae are found in both the marine and freshwater environments and may adversely affect human health, water quality, livestock, wildlife, tourism and aquaculture operations.

The issues that confront both freshwater and marine algae toxin researchers are often similar. For example, analytical methods for toxin analysis, mechanisms of toxin accumulation, and taxonomic methods for identifying toxin producing organisms are common to all algal toxin research. We intend to foster scientific interactions, and educate ourselves about the different techniques and approaches being used to tackle similar research problems.

To subscribe to the list:
send a message to majordomo@aims.gov.au <majordomo@aims.gov.au with the following in the body of the message:
subscribe arnat
end

For comments about ARNAT, please e-mail Lyndon Llewellyn <l.llewellyn@aims.gov.au> of the Australian Institute of Marine Science.

**2005 Prime Minister's Prizes for Science**

The 2005 Prime Minister's Prizes for Science are now open for nominations

Closing date: Friday, 8 April 2005 AEST

DEST are seeking nominations to any of the following five awards:

- The Prime Minster's Prize for Science,
- Science Minister's Prize for Life Scientist of the Year,
- Malcolm McIntosh Prize for Physical Scientist of the Year;
- Prime Minister's Prize for Excellence in Science Teaching in Primary Schools; and
- Prime Minister's Prize for Excellence in Science Teaching in Secondary Schools.

Information about the Prizes and the online nomination process is available on https://sciencegrants.dest.gov.au/scienceprize/pages/home.aspx

**Environmental Events Calendar**

The Department of Environment and Heritage have a great website for advertising Environmental Events around Australia. Worth a look at: http://www.deh.gov.au/events/index.html

**From Brad Sherman**

Charles Todd, Tom Ryan (ARI) and I are collaborating on a talk for ASLO in Spain this June. We're bolting my hydrodynamic model of reservoir discharge temperature together with Charles's fish population model to predict the likely benefits that may accrue from cold water pollution mitigation below Hume Dam.

**Aquatic Animal Diseases Beaten with a Click**

An easy-to-use field guide that helps identify aquatic animal diseases is now available on CD-ROM. Australian Fisheries and Conservation Minister, Senator Ian Macdonald said the field guide - Aquatic Animal Diseases Significant to Australia: Identification Field Guide - was first published in 1999 to capitalise on a growing public awareness of the serious threats posed by aquatic animal diseases, and the success of AQUAPLAN, Australia's national plan for aquatic animal health. Senator Macdonald said the field guide is a must for fisheries and aquaculture managers, recreational fishers, border protection staff, environmentalists and students of aquatic animal health. URL: http://www.mffc.gov.au/releases/2005/05001m.html

**Making the Darling's future more sustainable**

The conclusions of a major, Murray-Darling Basin book which calls for a sustainable future for the Darling River corridor's water resources, biodiversity, agricultural and other economic enterprises are featured in the latest issue of Australian Landcare magazine.

The brilliantly illustrated volume - "The Darling" - examines attitudes and issues from social and land use perspectives.

The Landcare article is largely based on the concluding chapter authored by Kevin Goss, until recently a senior manager and Acting Chief Executive of the Murray-Darling Basin Commission and Jenny McLellan, a Basin pastoralist at Brewarrina in NSW.

Goss and McLellan say all the chapters of the book, each in their own way, offer conclusions about how natural resources in the Darling catchment should be managed in the future.

They offer ideas such as:

- bring over-exploitation of natural resources under control—limiting river diversions and controlling vegetation clearing.
- focus new development opportunities—innovation, new enterprises and higher value uses of resources—and attention to alternative land uses, specifically Aboriginal ivolvement in natural resource and heritage management.
- work with land managers— knowledge, new technologies and policy administration based on an understanding of how enterprises are managed and decisions made.
- strategic investment in nature conservation and biodiversity protection—priority conservation areas and agreements for off-reserve management.
- commitment to the principles of integrated catchment management—clarity of goals, stable organisations, thorough engagement processes, and accountable actions.
- better knowledge—as there is not yet sufficient understanding.

"Human well-being and prosperity in the Darling Basin is only assured if the river systems, ecosystem processes and natural biodiversity remain healthy and viable," they say. "Sustainability in the Darling Basin means working towards social, cultural, environmental and economic sustainability.

"It means balancing resource use between the environment and human consumption. It means removing the shackles of current leasehold arrangements and paving the way for new enterprises. It means connecting remote and isolated communities in the Basin to the information and services they need, and connecting people outside the Basin to the environmental realities and economic opportunities of managing the Basin's natural resources. It means looking ahead as broadly as we can, being prepared for new ways of thinking and being able to adapt to change. And above all, it means sharing the precious resources on which we humans, and the Darling Basin itself, both rely and survive on." For more information go to http://www.australianlandcaremagazine.com.au

**Land & Water Australia Senior Research Fellowship Winners announced**

The Minister for Agriculture, Fisheries and Forestry the Hon. Warren Truss recently presented the inaugural Land &Water Australia Senior Research Fellowships.

The winners for 2004-05 are:

- Dr Neil Barr - Dr Neil Barr is the leader of the Rural, Social Research Team with the Department of Primary Industries, Victoria;
- Dr Richard Evans- Principal Hydrogeologist employed by Sinclair Knight Merz Consultants; and
- Professor Sam Lake - is a Professor of Ecology, School of Biological Sciences, Monash University.

The Land & Water Australia Senior Fellowship Program was launched by Deputy Prime Minister the Hon. John Anderson on behalf of the Prime Minister the Hon. John Howard at a special function at Parliament House Wednesday 1 December 2004.

Land & Water Australia say the Senior Research Fellowships are "an exciting new initiative that will work at the intersection of two of the Australian Government's key science priorities: innovation and scientific excellence; and improved management of Australia's natural resources, particularly water."

During the peak of a researcher's career their most precious commodity is time. Many of our best scientific brains spend too much of their time on activities other than research — administration, managing people, writing research proposals, wrestling with budgets and so on.

In a new approach to funding science, these Fellowships are expressly designed to 'free up' the time of a select few of our leading researchers each year, to give them some time and space from the constraints of every day work.

The intent is to sponsor reflective, synthesis research by people at the top of their fields — in mid-career, rather than in retirement.

The result of this effort will be practical outcomes that advance the way Australians think about, interact with and manage our natural resources. Each of the Fellows will produce an outline of their thinking, findings and recommendations.

For more information go to the website at www.lwa.gov.au/news.asp?news=81&title=policy

**Go on, have a go!**

If you've been interested in science since you were a child, then it's a pretty good bet you tried to blow up, pull apart or construct something that you shouldn't have. **Bizarre Stuff you can make in your kitchen** can help you relive (or attempt for the first time) those experiments that they won't let you do in the classroom today. Visit: http://www.bizarrelabs.com/control.htm

# FASTS

## SCIENCE NEWS 7 FEBRUARY 2005

**FEDERATION OF AUSTRALIAN SCIENTIFIC AND TECHNOLOGICAL SOCIETIES**

**Science and Technology for the Social, Environmental and Economic Benefit of Australia**

### 1. A Word from FASTS President Professor Snow Barlow

The Minister for Science, Brendan Nelson, will outline the government's fourth term science and technology agenda in an address to the National Press Club next week as part of FASTS annual Science meets Parliament program. While I am looking forward to this address and any new ideas and or initiatives within it, it is clear the government's policy agenda has already shifted. The government has clearly indicated that it wants to evaluate the effectiveness of its research investments within Backing Australia's Ability across the whole R & D spectrum.

This began in 2004 with a report on Commercialisation in publicly funded research agencies. The pace will increase this year with the establishment of the Research Quality Framework for publicly funded research and a Productivity Commission enquiry into economic, social and environmental returns from publicly funded research.

Work on the Research Quality Framework (RQF) or Research Assessment Exercise (RAE) has already begun with the establishment of an expert advisory group chaired by Sir Gareth Roberts and a round of discipline workshops. This Research Assessment Exercise has several important implications for Australian Science and its Scientists. While I welcome the opportunity for Australian Scientists to demonstrate the quality of their research it will be particularly important for all member societies to be fully engaged in the development of the RQF this year. Similar RAE's in Great Britain and New Zealand have demonstrated the strong possibility of unintended consequences and perverse outcomes from these RAE's if inappropriate assessment criteria and 'metrics' to measure research quality are chosen.

It will be particularly important for Australian science to demonstrate the confidence and maturity to develop assessment criteria and processes that truly reflect the objectives and culture of various types of research and the nature of our economy. A 'one size fits all' approach will not serve the interests of Australian science well. This exercise must find assessment criteria that measure the outcomes as well as the outputs of R & D.

I strongly encourage you and your societies to be fully engaged in this exercise which has the potential to shape the way we do science in Australia in the immediate future. The DEST website has the details and timetables of this process at www.dest.gov.au/resqual

**2. Science Meets Parliament, 8th & 9th March**

Science meets Parliament has a new format with greater emphasis on the 'science'. There will be several key issue forums open to the broader Parliamentary community, scientists and the media, including a bio-medical hypothetical hosted by Dr Norman Swan. The Industry Dinner will be at the Great Hall of Parliament House.

**DAY 1: TUESDAY 8TH - NATIONAL PRESS CLUB, CANBERRA**

**9.00 - 10.00am** Registration (Please deliver luggage to your accommodation first).

**10.00 - 11.30am** Compulsory session on the aims and objectives of SmP. Briefing on the key issues.

**11.30am - 12.30pm** Morning Tea and informal discussions with your scientist partners for the Parliament House meetings on Day 2.

**12.30 - 2.00pm** National Press Club Lunch **Guest speaker: The Minister for Education, Science and Training, the Honourable Dr Brendan Nelson.**

**2.15pm - 4.00pm** (Concurrent session) Briefing sessions on how to talk with Parliamentarians, the role of political staff and so forth. This session is required for all people who have not participated in SmP previously.

**2.30pm - 3.30pm** (Concurrent session) **Forum: *Understanding the Drivers of Public Concern: a case study based on understanding and attitude to stem cell applications.*** Biotechnology Australia will present findings from surveys they have undertaken and show the recording of a focus group discussion on stem cells, demonstrating both what and how the community think about new technologies and the moral debate that surrounds them. This session is open to participants who have attended SmP before and choose not to go to the afternoon briefing session.

**4.00pm - 4.30pm** Afternoon tea, meet your partners, summing up.

**7.00pm for 7.30pm** **Government-Industry-Science Dinner**, Great Hall of Parliament House (Dress: Lounge Suit). **Guest speaker:** Dr Caroline Kovac, General Manager, IBM Healthcare and Life Sciences (USA). The MC is Robyn Williams of ABC Radio National.

**DAY 2: WEDNESDAY 9TH - PARLIAMENT HOUSE, CANBERRA**

**7.30am - 8.45am** 'Science for Breakfast'. An informal breakfast specifically for early-career researchers, PhD students and Parliamentary advisors and researchers (now booked out).

**8.00am - 6.00pm** Scientists meet with the Parliamentarians/advisors.

**10.00 - 11.00am** **Forum: Mobility and flexibility in the global science and technology labour market.** Looks at barriers and career pathway issues in a competitive global labour market. (Committee Room 1S3)

**11.00 – 11.30am** Morning tea, including **address by Jenny Macklin, Shadow Minister for Education**, Science and Training. (Committee Room 2R1)

**12.00 – 1.00pm** **Forum: Climate Change: what is the scientific consensus?** (Main Committee Room, Parliament House)

**1.00pm – 2.00pm** Lunch – Committee Room 2R1

**2.00pm – 3.00pm** Question time in both House and Senate. Participants are encouraged to attend in the public galleries.

**4.00pm – 5.00pm** **Forum: Viral Pandemic Hypothetical** (Main Committee Room, Parliament House) hosted by Dr Norman Swan of ABC Radio National, with panellists:

- The Hon. Tony Abbott, Minister for Health
- Julia Gillard, Shadow Minister for Health
- Professor Peter Collignon, Director Infectious Diseases Unit and Microbiology Dept., The Canberra Hospital and Professor at ANU and the University of Sydney
- Dr Dominic Dwyer, medical virologist and infectious diseases physician at the ICPMR, Westmead Hospital, Sydney
- Professor Aileen Plant, Australian Biosecurity CRC and expert on epidemiology and member of various international and national pandemic advisory committees.

**NB:** All participants are strongly encouraged to attend the forums. Numbers will be limited for the first forum: *Mobility and Flexibility in the Global Science and Technology Labour Market*. However there are no limits on the *Climate Change* and the *Viral Pandemic Hypothetical* and we would like to see as many participants there as possible.

For most meetings there will be three scientists/technologists with each Parliamentarian. Most meetings are likely to go for about 30 mins, so you should be prepared to speak about your research for about 4 – 5 minutes to allow time for your colleagues to speak and for questions and discussion with the Parliamentarian. Be aware there is a chance that some will be cut short, particularly if divisions are called in either the House or Senate. Some meetings will be organised with key advisors.

Please undertake some research on your Parliamentarians. The Australian Parliament House website (http://www.aph.gov.au) is a very valuable resource. Parliamentarians' biographies and first speeches (where typically they outline their backgrounds and general interests and concerns) can be accessed at their official web pages. These can be found at:
**House of Representatives**: www.aph.gov.au/house/members/index.htm
**Senate**: www.aph.gov.au/Senate/senators/index.htm These sites also have links to useful information on the electorates for members of the House of Representatives.

Senators represent States or Territories so do not have electorates. However, some Senators are based in regional centres (eg Senator Stephens in Goulburn, NSW) and have close links with local issues so it is useful to check Senators' electorate office addresses which are listed on the web page.

Parliament House also runs a very useful search engine called *Parlinfo* which is the easiest way to get access to speeches and comments made by Parliamentarians on all topics (http://parlinfoweb.aph.gov.au/piweb/).

### 3. FASTS' 20th Anniversary

In a nice coincidence, the 8th March is not only Science meets Parliament but also the exact 20th anniversary of invitations being sent to the Presidents of many Science societies to meet to establish a national science representative body. On the 12th November 1985, FASTS held its inaugural Board meeting. To coincide with this year's Annual Council Meeting in November, FAST will be holding a commemorative dinner. All former Presidents and all Science Ministers of the past 20 years will be invited and we hope all member Societies will be present too.

### 4. Government and Shadow Ministerial Appointments

The new Ministry of the re-elected Government has relatively few changes of relevance to scientists. Brendan Nelson retains the Education, Science and Training portfolio although the junior ministry will transfer from science to training. This change reflects the Governments increased focus on skills shortages (in the trades, VET sector etc as distinct from shortages in statistics, parasitology, entomology, systematics etc). In one sense this change strengthens science to the extent it will be a cabinet position (previously Peter McGauran was not in cabinet). Jenny Macklin is the Shadow Minister.

Peter McGauran has moved to Citizenship and Multicultural affairs. Tony Abbott has Health and Ageing (Julia Gillard is the Shadow Minister). Ian MacFarlane retains Industry, Resources and Tourism (the Opposition spokesman is Martin Ferguson), while Warren Truss retains Agriculture, Fisheries and Forestry (Gavan O'Connor is the Shadow Minister) and Senator Helen Coonan retains Communications, Information Technology and the Arts (Senator Stephen Conroy is the ALP Shadow).

### 5. 16th Biennial Physics Congress a Major Success

The Australian Institute of Physics' year of celebration started impressively with one of the most successful Physics Congresses ever held in Australia. The 16th Biennial AIP Congress was held in Canberra between 30 January and 4 February and provided the launching point for the AIP's Einstein International Year of Physics, which celebrates the amazing achievements of a young, 26 year old, Einstein in 1905.

The Congress was attended by over 950 delegates, and attracted outstanding national and international speakers, including two Nobel Prize winners, Prof. Steven Chu (1997 Prize Winner) and Prof Tony Leggett (2003 Prize Winner), and representatives from other major Physics Societies, including Prof. Sir John Enderby, President of the UK Institute of Physics, Prof. Martin Huber, President of the European Physical Society, and Dr. Helen Quinn, Immediate Past President of the American Physical Society. Dr Quinn is also the AIP's 2005 "Women-in-Physics" lecturer and is touring Australia speaking to budding young scientists about the mysteries of the Universe.

The Congress was opened by the Hon. Gary Nairn MP, Federal Liberal Member for Eden-Monaro and Parliamentary Secretary to the Prime Minister. The Hon. Member also presented the after-dinner-speech at the Congress Dinner, held in the Great Hall of Parliament House, and drew on his professional career as a surveyor to highlight the role of Physics in our every day life. (He was involved in the surveying of the super proton synchrotron (SPS) ring at CERN).

Highlights of the Congress included an outstanding Plenary Speaker program, a diverse scientific program composed of oral and poster presentations, and a comprehensive and well attended outreach program aimed at high-school students and the general public. (The latter was supported by the ACT Government which declared the outreach event an official school excursion and provided school buses to transport students to the event). he scientific program showcased the work of Australian Physicists in areas as diverse as theoretical astrophysics and physics teaching, and included strong participation from graduate-students and early-career researchers. Feedback from delegates was extremely positive.

The AIP also recognised major achievements in Physics with the presentation of its major prizes and awards. These included the awarding of the 2004 Massey Medal, a joint IOP-AIP biennial award for outstanding achievements in Physics to Prof. Peter Drummond, the Walter Boas Medal for excellence in physics research, to Prof. George Dracoulis, the inaugural Education Medal for achievements in Physics teaching to Dr. Marjan Zadnik, the Alan Walsh Medal for contributions to industrial research to Drs. James Tickner and Brian Sowerby, the Bragg Medal for the best Australian Physics PhD Thesis to Dr. Michael Bromley, and Women-in-Physics Lecturer Awards to Prof. Halina Rubinsztein-Dunlop (2003), Dr. Nanda Dasgupta (2004) and Dr. Helen Quinn (2005).

The next AIP Congress will be held in Brisbane in December 2006. Further details of the AIP's "Einstein International Year of Physics" activities can be found at: http://aip.org.au/wyop2005/.

### 6. FASTS Conference in 2005 – The Governance of Science

FASTS is hosting a conference on the 'Governance of Science' in Canberra on September the 13th and 14th. It is timely for a rigorous and critical examination of the organisation and governance of science and technology in the light of significant global changes in the funding and structure of science and research over the past two decades.

Characteristics of these changes include:

- Development of new modes of knowledge production – disciplinary based research supplemented/surpassed by trans-disciplinary, problem-based research with more defined time frames and more informal networking, communication and dissemination;
- Governments increasingly linking R&D investment to economic outcomes – knowledge economies;
- Politicisation of science inputs into public policy – climate change, water;
- Scepticism and cutbacks in Government's investment in 'big science'– e.g. super-conducting super-collider debate in early 1990s in USA;
- More instrumental, vocationally oriented 'user-pays', 'student choice' models of education with consequences for science as generalist degree;
- Changing academic culture – the entrepreneurial university;
- Emergence of 'triple-helix' arrangements – state, industry, publicly funded research;
- Emergence of new modes of science publication – 'open access', 'author pays'; and
- Declining membership of science societies.

These changes raise important questions including:

- How should science represent itself to scientists, community and Government in the changing political, economic and institutional climate?
- How does science inform policy? – What does it do well? What doesn't it do well? How best to organise to influence policy.
- What responsibilities do scientists have and to whom?
- How does the practice of science sit with changes in accountability, transparency and institutional governance imperatives?
- Is the hierarchical structure of science, particularly academic science, a strong base for effective representation?
- What role and representation for the 'silent' voices in science – lab technicians, post-docs, science and technology in the VET sector, RAs, industry based scientists and so forth?
- What is the role and prospects of science societies?

Further information about this conference will be posted on www.fasts.org

## 7. FASTS' Calendar for 2005

The main events in the FASTS calendar for 2005 are shown below.

| Date | Function | Venue/time |
|---|---|---|
| 8-9 March | Science Meets Parliament | Canberra |
| 29 March | Exec meeting | FASTS office 8.30 am |
| 11-12 April | Board meeting | Melbourne |
| 26 April | Exec meeting | FASTS office 8.30 am |
| 24 May | Exec meeting | FASTS office 8.30 am |
| 28 June | Exec meeting | FASTS office 8.30 am |
| 26 July | Exec meeting | FASTS office 8.30 am |
| 18-19 August | Board meeting | Sydney |
| 13 -14 Sept. | Governance Conference | Canberra |
| 27 September | Exec meeting | FASTS office 8.30 am |
| 25 October | Exec meeting | FASTS office 8.30 am |
| 21-22 Nov. | AGM, ACM & Board | Canberra |
| 29 November | Exec meeting | FASTS office 8.30 am |
| 20 December | Exec meeting | FASTS office 8.30 am |

## 8. Research Infrastructure

In March 2004, the National Research Infrastructure Taskforce released a paper with a raft of recommendations concerning resource allocation for research infrastructure. The Government's responded by establishing a National Collaborative Research Infrastructure Strategy, announced as part of Backing Australia's Ability 2 in May 2004.

FASTS supports the Government initiative to provide $542 million over 2004-05 to 2010-11 for the National Collaborative Research Infrastructure Strategy to provide researchers with access to major infrastructure, link infrastructure funding to National Research Priorities and to foster greater research collaboration and the collaborative use of research infrastructure.

However, FASTS urges the Government to adopt the recommendation of the National Research Infrastructure Taskforce "That a National Research Infrastructure Council (NRIC) be established to further develop, implement, review and monitor the National Infrastructure Strategic Framework and, in particular, to develop and implement a national process to identify and prioritise research infrastructure needs" so that the continuing needs for infrastructure can be developed. Our concern is that the while research infrastructure is very important it is only one third of the infrastructure required to ensure that our investment in science and technology contributes effectively to wealth generation in Australia.

Two other areas of infrastructure investment need urgent attention. The first is the infrastructure in Universities, TAFE Colleges and schools, which is used to encourage people to become scientists and technologists and to train them to international standards. There is strong evidence that this infrastructure is not up to scratch and falling behind.

The second area of infrastructure investment which needs to be addressed is the infrastructure that is needed to take research from the laboratory into prototype development and then to full scale production. The latter investment is clearly the responsibility of the private sector. The intermediate stage which is variously described as 'proof of concept', 'pilot scale production' or 'prototype development' is seldom performed in Australia, thus vastly increasing the possibility that the value adding to our inventions will take place overseas. Public investment needs to be made in open access facilities for these purposes.

We recommend that the Government set up a 'National Science and Technology Education Infrastructure Taskforce' to report on the true state of the first issue and a 'National Prototype/Pilot plant Infrastructure Taskforce' to report on strategic investments to address the second issue.

### 9. National Science, Engineering and Technology Skills Audit

The government will undertake a National Science, Engineering and Technology Skills Audit this year. The audit will focus on the extent to which Australia's current and future industry and research body needs are being met by the higher education and vocational education and training (VET) sector in the supply of science, engineering and technology graduates. In particular, it will provide an understanding of where shortages lie and will examine:

- the supply of science, engineering and technology skills from all training and education sectors and report on supply trends;
- public and private sector demand for science, engineering and technology skills from industry, the research community and education providers, both now and into the future;
- how successful the education sectors are in meeting existing science, engineering and technology skill needs and responding to emerging needs;
- the long and short-term trends in the emigration and migration of science, engineering and technology graduates and the impact this 'brain gain, brain drain' issue will have on Australia's skills base – particularly as we face an ageing workforce and countries with greater research expenditure. Global demand for skills in these fields will also be analysed.

The audit will consider the supply and demand of science skills across a broad range of science, technology and engineering disciplines and conduct case studies of specific industries. FASTS President, Professor Snow Barlow, is on the steering committee appointed to oversee this audit process.

### 10. FASTS Structure and Constitution

The 2004 Annual Council Meeting of FASTS held in Canberra on 24 November 2004 decided that the FASTS' structure and Constitution need to be changed. After much discussion there was consensus that:

- FASTS should no longer maintain the distinction between corporate and affiliate members in terms of voting - all members to have a vote;
- Whatever final structure is determined it should be simple;
- FASTS look to develop alternate funding sources other than just membership; and
- Need to broaden the FASTS base including industrial, technical colleges and VET.

There was also discussion over the structure of the Board. It was agreed the structure committee under Vice-President Rob Norris would develop various models for further consideration, and a new model and constitution will be presented to the Annual Council Meeting to be held in November 2005.

DISCLAIMER: *The Federation of Australian Scientific and Technological Societies (FASTS) has taken all reasonable precautions and made all reasonable efforts to ensure the accuracy of material contained in this document. However, FASTS makes no warranties, express or implied, with respect to any material published in Science News.*

# CONFERENCE CAPERS

## 4th National Waterwatch Conference

John Hawking, Lyn Smith and Kathie Le Busque (MDFRC, Albury) attended the 4th National Waterwatch Conference (Navigating the Rapids) from the 7th - 10th February held at the University of Melbourne. The aim of the conference was to provide a forum to promote and advance community involvement in sustainable water management.

John, Lyn and Kathie presented two workshops at the conference demonstrating the internet based interactive educational tool to the "Identification and Ecology of Australian Freshwater Invertebrates" that has been in development for the last two years. It is the first comprehensive online educational tool including colour digital imagery of live animals and their body parts, life cycles and habitats that will be available to the public.

The premise of this online guide was to collate the identification keys to invertebrates (that have been produced in hard copy over many years) and present them in such a way that identification to lower taxonomic levels can be achieved by people with varying taxonomic background, from community group members through to scientists. In order to achieve this user friendly guide, the keys were simplified and a thorough glossary of taxonomic terminology was collated. Instead of using line drawings to illustrate taxonomic features for identification the guide includes colour digital imagery so that what is being seen down the microscope relates easily to the key on screen taxonomic feature required to identify your animal. In addition the couplets give images of species that are often misidentified and of immature stages which are commonly confused. Along with this taxonomic information the guide also provides references, bug codes, distribution information and pollution sensitivity ratings (SIGNAL) along with important ecological information at each level of identification (major group, order, family and genus).

The guide is based on the internet so that it can be updated online as new information and funding becomes available. It has print friendly pages so that if an online computer is not available in the laboratory, users can print the pages that they need to make an identification.

The guide was well-received by the conference delegates and is expected to become an important resource for Waterwatch groups nationally. John was, however, disappointed that at this conference no one asked him for his autograph (unlike at previous Waterwatch workshops!) The online guide will be readily accessible soon.

***Kathie Le Busque***

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December 2004 432 pages HB ISBN 0 85199 822 4

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# BOOK REVIEW

Chadderton, WL, Brown, DJ, and Stephens, RT (December 2004) *Identifying freshwater ecosystems of national importance for biodiversity - discussion document.* Department of Conservation New Zealand, Wellington.

Review (abridged) by:
Jon Nevill www.onlyoneplanet.com.au 20 February 2005

The Chadderton report represents a critical milestone in efforts to establish adequate protection for New Zealand's most important rivers. The report seeks to identify rivers of national importance in relation to biodiversity. In doing so, it highlights difficulties in providing comprehensive protection for freshwater ecosystems inherent in the current state of scientific knowledge. It also highlights a long-standing and continuing failure by the NZ government to adequately resource freshwater conservation programs - given a stated goal to arrest the decline of the nation's freshwater biodiversity. Such major difficulties are magnified in the Australian context, where attempts to provide such protection lag seriously behind NZ programs.

NZ's *Reserves Act 1977* and NZ's *Biodiversity Strategy 2000* contain commitments' to "protect the full range of remaining biodiversity (species, natural habitats and ecosystems) and maintain viable populations of all indigenous species and sub-species", and this commitment forms the backbone of the report's attempt to define river systems "of national importance".

Chadderton et al. started by defining "national importance" in the context of river biodiversity as involving the identification of a minimum area that could protect at least one example of every identifiably distinct freshwater ecosystem - allowing that such a list would be enlarged if necessary to include habitats of endangered species. However, in practice this definition appears to have produced a list which was 'unacceptably long' when assessed against the author's judgements about what is likely to be politically feasible.

The investigation started by developing a freshwater bioregionalisation at the national scale. Freshwater bioregions have been identified in North America (Abell et al. 2000, 2002). In the Australian context, there have been recent calls for the development of such a bioregionalisation in Australia - however at this stage no definitive Australian study has been undertaken or planned. The NZ bioregionalisation identified 15 regions in the North Island and 13 in the South, plus Stewart Island - 29 in all. "The biogeographic framework identifies geographic units that are likely to have experienced similar physical disturbance regimes, and have shared source populations and pathways for colonisation, or geographic barriers to the dispersal of freshwater biota" (report p.6).

The Chadderton report used an existing classification of river-system type – the River Environmental Classification (REC) (Snelder and Biggs 2002) to provide a second layer of biodiversity surrogate information. "A total of 4706 river catchment units were defined at five hierarchical levels, representing catchments or major tributaries nested within larger catchments" (report p. 5). The report states that the REC was simplified for this study by the removal of climate and land cover variables – yielding 215 river classes for the South Island and 154 for the North Island.

According to the report (page 6): "... each river [catchment] class should contain unique elements of biodiversity (ie: distinctive communities or specie assemblages) so capturing a full range of environments (river classes) should therefore ensure representation of a full range or biological diversity".

According to Chadderton et al. (2004:7): "... a final candidate list of catchment units was derived on the basis of one or both of two rules:

- the site was listed in the minimum set required for representation of 100% of the river classes (in each bioregion), *and* listed among the top ten sites ranked by natural heritage value within the bioregion; and / or
- the site contained special features (ie: endangered species, floodplain forests), or was connected to a nationally important wetland, lake or estuary."

A central objective of the report – to identify a fully representative set of the nation's river systems, has not been met by the present methodology, although the authors may argue that this objective has been approached within the limits of practicality. As the authors state (p. 7): "... integrated and rigorous conservation action [over the selected river catchment units] will help secure examples of freshwater biodiversity, but will not halt the decline in New Zealand's freshwater biodiversity."

**References**: the full text of this review, along with a list of references, can be found at the OnlyOnePlanet website. The direct link to the site's freshwater page is http://www.ids.org.au/~cnevill/freshwater.htm

# FORTHCOMING CONFERENCES/WORKSHOPS

## OVERSEAS

### 2005

**New Currents in Conserving Freshwater Systems**, to be held in New York City on 7 and 8 April. Hosted by the American Museum of Natural History is sponsored by the Center for Biodiversity and Conservation, in collaboration with the World Wildlife Fund, U.S. Fish & Wildlife Service, and National Park Service. Major funding is provided by the National Oceanic and Atmospheric Administration. Additional support is provided by the American Society of Ichthyologists and Herpetologists, The Nature Conservancy, and the American Fisheries Society. Visit: http://cbc.amnh.org/symposia/freshwater/index.html

**ASLO Summer Meeting:** *A Pilgrimage Through Global Aquatic Sciences* will be held in Santiago de Compostela (NW Spain) from 19 to 24 June. Further information visit: http://aslo.org/meetings/santiago2005/

**19th Annual Meeting of the Society for Conservation Biology (SCB 2005)** "Conservation Biology Capacity Building & Practice in a Globalized World" will be held at the Zoology Department of the Universidade de Brasília (UnB) from 15 to 19 July. Further information visit: http://www.scb2005.unb.br/

**4th Worldwide Dragonfly Association Symposium of Odonatology** will be held at the University of Vigo, campus Pontevedra Spain from 26 to 30 July. For more detailed information visit: http://webs.uvigo.es/c04/WDA/index.htm

**W3M Conference For Wetlands: Monitoring, Modeling and Management**, to be held in Wierzba, Poland from 22 to 25 September. See website: http://levis.sggw.waw.pl/wethydro/ for further information.

### 2006

**Internation Conference on Riverine Hydroecology: Advances in Research and Applications** Incorporating **10th International Symposium on Regulated Streams** (TISORS 11) and **2nd International Symposium on Wood in World Rivers** (ISWWR 11) will be held in Stirling, Scotland from 14 to 18 August. Further information visit: http://www.sbes.stir.ac.uk/riversconference

# AUSTRALIAN

## 2005

**Victorian Sustainable Development Conference 2005**, will be held at ZINC in Federation Square, Melbourne on 15 and 16 March. For further information, please contact Olivia Trussell at Hallmark Conferences & Events on (03) 9530 8900 or go to http://www.halledit.com.au/conferences/vicsustainable/

**The 8th International Conference on the Biogeochemistry of Trace Elements** (ICOBTE) will be held at the Adelaide International Convention Centre, Adelaide from 3 to 7 April. More information visit: www.clw.csiro.au/conferences/8thICOBTE/

**How Precious if our Water?** Discussing the needs and uses of water in rural communities. This conference is being organised by the Murray Darling Association on 29 April, in the Barossa Valley, South Australia. For further information visit http://www.mda.asn.au/go/home (Events).

**OZWATER Convention & Exhibition** will be held in Townsville from 5 to 7 May, and Brisbane from 8 to 12 May. The convention and exhibition will address many of the key issues facing our water industry. The topics will range from policy to science and technology and, at the same time, the trade exhibition will expose around 150 different organisations to the delegates and other visitors. http://www.awaozwater.net

**2nd Riverina Biodiversity Forum**, with the theme "Biodiversity in Modified Landscapes" is to be held at the Griffith Regional Theatre from 26 to 28 May. Anyone interested in attending should visit the Forum webpage (www.rga.org.au/environment/biodiversity-forum.asp) for more information and registration details, or contact Janelle McGufficke on (02) 6953 0598.

**2005 Australian Society for Fish Biology Workshop and Conference** will be held in Darwin from 11 to 15 July. The theme for this year's workshop is 'Monitoring Fish Stocks and Aquatic Environments'. Registration and abstracts are now being accepted. For further information see: http://www.territorylive.com/asfb2005/

**International Conference on Engaging Communities**, an initiative of the United Nations and Queensland Government to be held from 14 to 17 August, at the Brisbane Convention and Exhibition Centre, QLD. Further information email: info@engagingcommunities2005.org or visit the website at www.engagingcommunities2005.org

**8th International River*symposium* 2005: "Water and Food Security – Rivers in the Global Context"** takes place from 6 to 9 September at the Brisbane Convention & Exhibition Centre. For more information visit http://www.riverfestival.com.au/2005/content/standard_sym.asp?name=RiverSymposium.

**Annual Australasian Society for Ecotoxicology** Conference will be held at the University of Melbourne from 25 to 28 September. The theme of the conference is "Toxicological approaches to predict and assess ecosystem stress". For further information contact Carolyn Brumley on (03) 8862 3518 or cbrumley@golder.com.au or go to the website www.conferences.unimelb.edu.au/ecotox

**9th Conference International Society for Salt Lake Research** (ISSLR), to be held at Curtin University of Technology, WA from 26 to 30 September. Further information visit: http://www.isslr.org

**44th Annual ASL Congress** to be in held at the University of Tasmania from 28 November to 2 December.

**Australian Entomological Society's 36thAGM and Scientific Conference, Society of Australian Systematic Biologists Conference, and 7th Invertebrate Biodiversity and Conservation Conference (IBCC 2005).** These conferences are to be held from 4 to 9 December at the Australian National University, Canberra. For further information see: www.invertebrates2005.com, enquiries to Sally Brown at Conference Connections Sally.brown@uq.net.au

# ASL VOLUNTEERS

The following members have volunteered to speak as experts on behalf of the ASL.

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[1] Rich Text Format (.rtf) is a format that can be opened in any word processor, although slight variations in layout may occur in different programs.

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